Playing make believe in the Finnish Digital Agency

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Abstract

The Finnish Government has decided that public services will be primarily digital in the future, suggesting proactive, personalized services that increase efficiency and improve user experience. Meanwhile, digital governance initiatives have been criticized for not only exacerbating existing structures of inequality but also creating new ones. Where do we draw the line between “personalized services” and “surveillance state”? How do we balance questions of efficiency and convenience with accountability and democracy? The digital public systems of the future will have consequences far more complex than what traditional design practices can help prepare us for. We need other tools to examine which societal implications we should steer clear of and those we want to steer towards.

This thesis explores the use of speculative design and live action roleplay (larp) to explore potential socio-political implications of the future of the Finnish digital public sector. The case study is the Aalto Thesis Project – Design system in Digital Public Sector in collaboration with the Finnish Digital Agency. Background research and expert interviews create the base for the speculative design of an automated, public service platform, Suomi Cloud. The larp, a citizen’s feedback session set in the year 2035, explores the socio-political implications of Suomi Cloud through 11 characters representing future Finnish citizens. The larp is played in a workshop with employees from the Finnish Digital Agency and students from the Aalto Thesis Project group.

The research demonstrates that speculative design and larp are effective tools for engaging concrete discussions about the future. Larp and improvisation allow for immersion in the fictional narrative and spontaneous reactions less clouded by rationalization. Different characters create multi-angled discussions and evoke empathy for the characters’ experiences. However, a need for facilitation and explicit articulation of issues to discuss is identified to elicit more profound reflections on societal and political implications and structures. Moreover, the study suggests a need for a more continuous mode of working to move from speculation to action.

While the thesis is based on just one case study, the project indicates a synergy between speculative design as an approach and larp as a medium. Additionally, the research contributes to a growing body of work that utilizes speculative design in the public sector context.

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1. Introduction

...how can we prevent the introduction of technologies at odds with the kinds of personal habits, social relationships and institutional patterns needed to sustain the civic culture of democracy? (Langdom Winner, 1995)

Technology is never neutral, it enables some actions and disables others, ultimately embodying societal structures of power. Designed to make our lives easier, digital products and services have today become ubiquitous for many of us (the past year more so than ever). However, with all the benefits digitalization has to offer, it has not come without a price.

Smart home technologies have opened new avenues for domestic abusers to surveil their partners (Webb, 2020). Social media platforms have stolen our time, sleep, and personal data, while opening up a breeding ground for online harassment (Girish, 2020; Pacheco, 2021; Granville, 2018; Vogels, 2021). Optimization algorithms are pushing couriers and delivery drivers to the limits of both physics and traffic rules (Nova, 2019; Justice4Couriers, 2018; Chuang, 2020). Moreover, Amazon drivers are reporting peeing in bottles and coffee cups as their productivity quota does not allow for toilet breaks on their 10-hour shifts (Gurley, 2021). In some cities, an explosion in Airbnb rentals has driven local residents out of their neighborhoods due to inflation of long-term rental prices. In summer 2017 large protests broke out in Barcelona with protesters holding signs reading “This isn’t tourism, it’s an invasion” and “Homes not hotels.” (LabGov, 2018; Mead, 2019; Sansom, 2017)

Were these implications designed intentionally? Probably (hopefully) not. These services were most likely designed to create “delightful user experiences” guided by the principles of user-centered design (UCD). Since the 1980s the approach has spread throughout the world and is today considered the industry standard when designing new products and services. (Rothstein & Shirey, 2004; Mao, Vrendenburg, Smith, & Carey, 2005; Giaccardi & Redström, 2020) By empathizing with the users’ needs, goals, and situations, the approach is seen as a humane and ethical way to design innovations (Keinonen, 2017). However, as the world is changing rapidly and

growing increasingly complex, several designers are pointing out the limitations of user-centered design. (Robinson, 2019; Giaccardi & Redström, 2020; Lloyd, Mancuso, Sonis, & Hubert, 2020). Designers Alexis Lloyd, Devin Mancuso, Diana Sonis, and Lis Hubert (2020) outline their thoughts on the imitations of UCD in their essay "Camera Obscura: Beyond the lens of user-centered design". They note that by limiting our focus on the user as a consumer, we are ignoring the experiences of those relating to the system in other ways. Additionally, by focusing on creating positive user experiences strictly in the interaction between our designs and the user, we are only seeing the first order of implications, not the second nor the third. (Lloyd et al., 2020) Perhaps it is at the edges of our UCD lens, the actors implicated by the system but not direct users or the second and third-order implications, where we can find the unintended consequences like those mentioned earlier.

An approach to design that seeks to go beyond the lens of UCD and investigate these unintended consequences before they take place is speculative design. Speculative design aims to examine the cultural, social, and ethical implications of new technologies. By speculating on possible futures, speculative design practitioners will create artifacts representing the alternative future as a way of asking "what if"? To open debate and discussion about what kind of worlds we want and do not want to live in. (Dunne & Raby, 2013; Mitrović, 2015). The practice has garnered some critique for being elitist and technocratic, with project outcomes mainly being displayed in gallery settings with an excessive emphasis on design aesthetics (Bardzell & Bardzell, 2013; Blythe, Yauner, & Rodgers, 2015; Prado & Oliveira, 2015; Blythe, Andersen, Clarke, & Wright, 2016). However, there is also a growing body of work of speculative design being used in "the real world" as a tool rather than an outcome in itself. Particularly in the public sector, speculative design has been used to engage citizens in discussions on policy issues and include them in decision-making processes. The practice has shown to be effective in building empathy and provoking creative thinking while opening a debate about the societal and ethical dimensions of topics citizens were not necessarily familiar with. (Darby et al., 2015; Policy Lab, 2016b; Policy Lab, 2019)

In the European Commission's 2019 Digital Economy and Society Index (DESI), Finland ranks first out of the 28 EU member states, marking Finland as a European top leader in digital public services (European Commission, 2019). The Finnish Government has agreed that public services will be primarily digital in the future (Valtiovarainministeriö, 2018). Digital service development in the public sector is now maturing from simply digitizing (such as online application forms instead of paper) to utilizing digital technologies to transform and innovate public service delivery and create new public value (OECD/IDB (2016). Management consultancies are arguing

that citizens are now so used to seamless user experiences from the private sector that the public sector must follow suit to keep citizens satisfied (Eggers & Hurst, 2017; Daub, Domeyer, Lamaa, & Renz, 2020). Deloitte even asks, “What if government services worked like Amazon?” recommending governments to create digital services that are personalized and that anticipate the citizen’s needs (Eggers & Hurst, 2017). To create such services the public sector has to increase its collection and use of citizen data, integrate service journeys across multiple public entities and deploy the use of algorithms to automate manual labor (Eggers & Hurst, 2017; Scholta et al., 2019). But do we want our public services to work like Amazon? Given the track record of digitalization in the private sector, what can we expect of implications from the digital public sector?

Phillip Alston (2019), the UN secretary of Human Rights, warns governments around the world not to “stumble zombie-like into a digital welfare dystopia” and incorporating digital governance practices that “might be incompatible with the principles of human rights”. For example, in Denmark, mandatory digital self-service solutions made it increasingly difficult for those already at the fringes of society to receive their welfare benefits (Schou & Pors, 2019). In Sweden, thousands of unemployed citizens were wrongly denied benefits when a faulty algorithm resulted in up to 15% of the systems’ decisions being incorrect (Wills, 2019). Thus, as digitalization in the public sector moves forward there is a need to examine and account for the possible unwanted socio-political implications that will follow.

Therefore, this thesis aims to explore the use of speculative design and live action roleplay (larp) as tools for investigating socio-political implications in the digital public sector. To have a chance of avoiding unintended consequences, it is necessary to explore and speculate on what they might be. Moreover, for possible negative implications to truly be accounted for and mitigated, it is not enough that the realization and debate of such implications only happen in academic settings and white gallery rooms. Neither is it enough (albeit it is necessary and important) that regular citizens and the general public create this debate among themselves. The understanding of social, ethical, and political implications of the implementation of new technologies needs to be brought to those with power to influence them, the designers and implementors of the technologies themselves, in this case, the digital public sector.

1.1 Research aims, questions and objectives

The research in this thesis is based on a case study done in collaboration with the Digital and Population Data Services Agency (Finnish Digital Agency or DVV). The aims of this thesis are two-fold; 1. to explore socio-political implications of the future of the digital public sector in Finland, and 2. to test out speculative design and live action roleplay as tools for the purpose in the public sector context. Therefore, the main research question and supportive sub-questions are as follows:

RQ: How can socio-political implications of the digital public sector be explored using speculative design and live action roleplay?

SQ1: What might be the potential socio-political implications of the future Finnish digital public sector?
SQ2: How might speculative design and larp be used to prompt speculation of potential socio-political implications?
SQ3: How might the exploration of socio-political implications contribute to a more equitable digital development in the public sector?

The research objectives for the thesis are:

RO1: To gain an understanding of the current and emerging trends in the digital public sector globally and in Finland through literature review, desktop research and expert interviews with employees from the Finnish Digital Agency
RO1: To design a speculative vision of the future digital public sector in Finland based on the current landscape of e-government activities and projects, with special attention to the work of the Finnish Digital Agency.
RO3: To design a larp using the personal stories of the characters to exemplify potential socio-political implications of the speculative vision.
RO4: To design and facilitate a workshop where employees from the Finnish Digital Agency can discuss and explore the socio-political implications of the speculative vision through a game of larp.

In the field of design research this thesis aims to contribute to the growing body of work that utilizes speculative design in real-world contexts, especially the public sector. The thesis also aims to explore how larp could benefit and contribute to the field of speculative design.

1.2 Context

The context of this thesis is the Aalto Thesis Project: Design System in Public Sector with the Finnish Digital Agency as the partner organization. The Aalto Thesis program forms multidisciplinary teams of 2-4 students that work together to solve a challenge for the partner organization, while also completing their individual thesis work. The project challenge was to provide the Finnish Digital Agency with valuable insights towards their goal of becoming the best public digital agency in the world. Their focus is on creating cohesive user and service experiences across all public sector digital services. The project allowed me to explore the use of speculative design and live action roleplay in the digital public sector context. The aim was to explore and surface potential socio-political implications of the future trajectory the Finnish Digital Agency is headed towards.

1.3 Research approach

The research approach of the thesis is practice-led which falls into the general area of action research (Candy, 2006). Practice-based and practice-led research is built on the idea that *"creative work in itself is a form of research and generates detectable research outputs"* (Smith & Dean, 2009). In the case of this thesis, the creative work is the case study with the Finnish Digital Agency. Practice-led research is mainly focused on the nature of the practice itself, with the main goal of advancing knowledge about and within the practice (Candy, 2006).

1.4 Thesis structure

The first chapter provides an overview and introduction to the thesis project, outlining research aims and objectives. The second chapter dives deeper into the topic of digitalization in the public sector and some of the socio-political implications that have followed. The third chapter introduces the design approach; what speculative design and live action role play are, how they are related, and why they have been chosen as methods for this project. The fourth chapter outlines the case study of the thesis, including an introduction to the Aalto Thesis Project, a summary of the background research, a description of design choices, and workshop design. The fifth chapter presents the analysis and results of the research and the sixth chapter includes a discussion of the findings as well as areas of further exploration. Finally, the seventh chapter presents the conclusion including a summary of the findings.

2. Background

2.1 From e-government to digital governance, digital transformation in public sector services

E-government refers to the use and application of information technologies in public administration. While the term emerged in the late 1990s, together with the internet boom, the use of computation technologies in the government can be traced back to the history of computers (Grönlund & Horan, 2005). Other terms include digital government, one-stop government, and online government, all describing how public organizations use digital technologies both for external use; communicating with and delivering services to citizens, and internal use; i.e. managing data and streamlining work processes (Grönlund & Horan, 2005; Mattsson, 2016). Today e-government initiatives can be found in all corners of the world. In 2018 all 193 Member States of the United Nations offered national digital portals, with over 70% offering at least one transactional service online, such as paying for utilities, submitting income taxes, or registering a new business. Nearly two-thirds of the Member States demonstrated a high-level of e-government development, with European countries leading the development globally. (United Nations, 2018) In the Digital Economic and Society Index report of 2019, 64% of European citizens reported having used public services online. Over 90% of the citizens in Sweden, Estonia, Finland, and Denmark reported the same (European Commission, 2019).

As e-government is maturing, governments are shifting their efforts from merely digitizing existing processes to utilizing digital technologies to transform and innovate public service delivery and create public value (OECD/IDB (2016). In 2017 Deloitte's Center for Government Insights published a report asking, "What if government services worked like Amazon?" As most citizens are increasingly used to frictionless digital experiences from the private sector, higher expectations are set for the public sector service experience. In the US, consumer surveys reveal that dissatisfaction with government services has fallen to the lowest point in eight years. Accordingly, Deloitte deems it necessary for public organizations to bridge the gap between their service experience and that of companies such as Amazon, eBay, Uber, and Airbnb. For this purpose, Deloitte urges governments to create robust digital

platforms that anticipate the user's needs and offer personalized services available in just a few clicks through one-stop-shop portals. (Eggers & Hurst, 2017)

The one-stop-shop

The one-stop-shop approach to e-Government is well-known and has been around since the start of the century. In 2014 over 70 countries had implemented the concept (United Nations, 2014) that provides "a single point of access to electronic services and information offered by different public authorities" (Wimmer, 2002). In such portals, services are often organized based on life-events, thus integrating government services from a citizen's perspective (Tambouris, 2001). However, the integration of services has often stopped at an interface-level, while the backend, the different government offices, has stayed independent. Consequently, the so-called one-stop shops have typically only been information portals bundling information and services while sending citizens to separate organizations to complete the service transaction.

Deloitte outlines three pillars of digital transformation for governments to deliver the customer experience citizens are demanding; 1. an end-to-end digital experience developed from the customer's point of view, accessible anywhere, anytime, and from any device. 2. a unique, uniform digital ID that grants agencies access to the appropriate data and services, and 3. mechanisms that allow agencies to share data across the state enterprise. In the first pillar, focusing on user experience, Deloitte emphasizes user preference for a uniform environment and seamless experience. (Eggers & Hurst, 2017) One of the tools governments around the world has used to tackle the issue is developing and implementing national, unified design systems to be used across all government organizations (Jordan & Dribbisch, 2018). A design system is a set of guidelines, reusable snippets of code and design assets, and shared practices coherently organized for the development of digital products. Design systems are said to make the design process more efficient and more coherent and logical user experiences (Pyrhönen, 2019).

The second and third pillars are closely related to the Once Only Principle (OOP), which aims to reduce the administrative burden of citizens and businesses through secure data sharing across public administration and even national borders. Thus, the OOP allows users of public services to provide certain information to authorities and administration only once. The once-only principle is one of the fundamentals for the European Union's "eGovernment Action Plan 2016-2020". Moreover, the European Commission is actively promoting the implementation of the OOP across borders as it is part of several initiatives related to the European Digital Single Market. (Once-only | TOOP. EU.2020)

The no-stop-shop

Widespread data exchange, collection, and analysis with the emergence of AI and machine learning algorithms has introduced the possibility of moving the traditional public service delivery model from reactive to proactive or even predictive. Scholta, Mertens, Kowalkiewicz, and Becker (2019) outline an e-government stage model for governments to transition e-governments from one-stop-shops to no-stop-shop. The model includes three dimensions; Integration of data collection, Integration of data storage, and Purpose of Data Use to move from the reactive one-stop-shop approach to a predictive no-stop-shop. The model also includes three different stages: one-stop-shop, limited no-stop-shop, and no-stop-shop. To reach the third level of the stage model Scholta et al. suggest that service delivery should not demand any input from the citizen to be triggered. Instead, data collection should be integrated and distributed across different sources such as through third parties like the citizen's employer, submitted by the citizen through an earlier interaction with public series, or even without the citizen's direct involvement automatically shared by digital devices or even social media.

The second dimension of the stage model involves the integration of data storage, which is an essential part of the third dimension, the use of data in order to provide proactive and predictive services. For data to be used and analyzed effectively, data exchange and integration must break silos and cross boundaries. Scholta et al. consider the ideal level of integration to span across all the government organizations, preferably with one single database. According to Scholta et al., combining this level of integration with the concept of digital identity, where citizens own and manage their data, would provide governments with access to a citizen's entire digital profile, including private, business, and government-related data. (Scholta et al., 2019)

To reach the third level of the stage model, the no-stop-shop, the third dimension, Purpose of Data Use, is essential. Using data to trigger proactive and predictive service delivery is necessary to implement the "no" of a no-stop-shop. This can only be done through extensive data analysis with the help of (machine-learning) algorithms. In the no-stop-shop, it is the governments' responsibility to know when and what service citizens need and provide it accordingly. (Scholta et al., 2019) Such algorithms are increasingly being used in the public sector, from automating tax returns to predicting children at risk of abuse (Liu & Mchangama, 2018).

The era of digital governance

Phillip Alston calls the times we are living in "The era of digital governance". In many countries, digital communication is becoming the norm between the citizen and the State. Governments

around the world are praising the benefits of public sector digital transformation. The opportunity to use public services regardless of time and place saves time and effort for both citizens and authorities, ultimately producing more efficient governance saving public resources. Additionally, the digital transformation intends to transform the relationship between citizens and the State, putting more power in the hands of citizens by being more responsive to their needs so that citizens can enjoy higher levels of well-being. (Alston, 2019)

2.2 Digital welfare dystopia

The promises of digital governance are many, and digitalization initiatives are presented with words such as “innovation”, “efficiency”, “intelligent”, “user-friendly”, and “flexible”. However, Phillip Alston, the UN secretary of Human Rights, warns governments worldwide not to *“stumble zombie-like into a digital welfare dystopia”* and incorporate digital governance practices that might be incompatible with the principles of human rights.

Hardill and O’Sullivan outline how the shift of public services from offline to online can be especially detrimental for those already disadvantaged and how it affects their right to full citizenship. When services are moved to the online sphere, digital skills, knowledge, and economic resources, to acquire digital devices and internet access, are critical factors of separation for those able to benefit from digitalization and those left behind (Hardill & O’Sullivan, 2018). While in the Nordic countries, internet access at home is generally very high, ranging from 94-98% in Finland, Denmark, Sweden, Norway, and Iceland (Eurostat, 2019), there is still improvement to be made in broadband and 4G coverage in rural areas (DESI-19). It can also be reasonable to assume that many of those that do not have internet access at home are in need of state welfare services (Mattsson, 2016). However, internet access does not necessarily translate to fluent internet usage. When public services are moved online, a lack of digital skills can be a significant barrier to accessing basic welfare rights and fully participate in society.

In the paper “Digital by default? A qualitative study of exclusion in digitalised welfare” Jannick Schou and Anja Svejgaard Pors (2018) outline their research on the effects of digitalization efforts in Denmark. The researchers conducted an ethnographic study of the citizen service centers that assist citizens with the use of digital public self-service solutions. The service centers appeared in Danish municipalities in the mid-90s. They used to function as the citizens’ primary point of contact with the public sector, where specially trained employees would serve the needs of citizens by handling customer cases and issuing official documents. In 2011, Denmark

established a Ministry of Digitization and announced that by 2015 *"it will be mandatory for citizens to use digital solutions to communicate in writing with the public sector. Once printed forms and letters have been phased out, all citizens will have to use online self-service."* With the implementation of digital self-service solutions, many of the tasks previously handled by the frontline workers of the service centers have been moved over to the citizens.

While an option to opt-out of digital services exists, citizens are automatically signed up and must actively contact authorities to regain a non-digital service option. Many citizens at the fringes of society with the most difficulties using digital solutions are then officially signed up yet unable to access and use the systems. Thus, the most significant and most labor-intensive users of the citizen service centers are already struggling and disadvantaged in some way. For example, homeless, struggling with addiction, unemployed, or dyslectic. Simultaneously, the frontline workers at the citizen service centers are no longer expected to be specialized staff. Their primary goal of service is no longer to solve the citizens' administrative problem or request but to help them help themselves using digital services. The subject of change is now the citizen themselves. Many of the frontline workers remarked that they were not able to provide guidance regarding the citizens' broader social and economic situation because the focus was now on the digital solutions. However, several of the users are in such a vulnerable position, economically, socially, and mentally that they cannot seek help digitally – to find out what to do, complete, and send an application. As the use of "Digital post" is mandatory, all communication there is considered legally binding. Thus if the citizens are not able to read and respond to the requests, they risk losing their welfare benefits. (Schou & Pors, 2019)

Additionally, the risk of losing welfare benefits does not stop at lack of internet access or digital skills, the design of digital systems themselves can create potential pitfalls. In India, the failures of their national ID system, Aadhaar, have had fatal consequences. One man starved to death as his family was not able to purchase subsidized rations as the thumbprint authentication failed (Khera, 2018). In Sweden, thousands of unemployed people were wrongly denied benefits as problems with the automated system used by the Employment Service had resulted in up to 15% of the systems' decisions being incorrect (Wills, 2019).

The increase in use of automated decision-making systems in the public sector has given rise to concern about what Jon Danahaer calls "the Threat of Algocracy" (Danaher, 2016). The term algocracy was first coined by Aneesh Aneesh in a book called "Virtual Migration". It describes a concept of control that is steered by algorithmic rules rather than bureaucracy or surveillance. While

the bureaucratic control method relies on actors internalizing and complying with a set of rules in addition to the threat of a particular consequence, e.g., a traffic fine, algorithmic control does not allow for deviations of the rule to take place at all. Actions are pre-determined; it is impossible to drive off the road because the road has walls on each side. (Boldrini, 2017)

Today algorithms are already conditioning our "possible actions." For instance, the possibility to get a loan or rent an apartment (credit scores), the possibility to move freely without suspicion (predictive policing), and the possibility to receive health care (algorithms allocating treatment) (Penner & Algorithm Watch, 2019a). These algorithms are only as good as the data they are trained on. Kate Crawford, a researcher at Microsoft, worries that predictive policing could become a self-fulfilling prophecy where more policing in poor neighbourhoods could lead to more arrests, leading to more policing. (Crawford, 2016)

Algorithms do not only determine acceptable and unacceptable behaviours; they are also used to decide what bodies can be deemed as acceptable. In the essay Design Justice, A.I., and Escape from the Matrix of Domination, Sasha Constanza-Chock (2018) explains what it is like to go through American airport security as a nonbinary, transgender, femme presenting person. The body scanners rely on a binary gendered body-shape data construct to flag bodies that deviate from the norm as potential risks. Constanza-Chock explains how she is consistently subject to "an embarrassing, uncomfortable, and perhaps even humiliating search by a TSA officer" when travelling as her body is flagged as anomalous by the millimeter-wave scanner. Before a person is scanned, the operator needs to select either "Male" or "Female". When the scanner discovers "abnormalities" that deviate from the statistical "Female" or "Male" body, it highlights these areas in fluorescent yellow on the panel display. For Constanza-Chock, it is a game of one or the other. If the officer selects Female, her groin area will be highlighted, if the officer selects Male, her breasts will trigger highlights in the chest area, ultimately flagging her as "risky" no matter what. Constanza-Chock's experience is only one example of how sociotechnical data-driven systems are disproportionately burdening queer, Trans, Intersex, and Gender Non-Conforming (QTI/ GNC) folks. While cis-normativity can also be burdening outside of the digital realm, digital systems automate and exacerbate the problem. (Costanza-Chock, 2018)

For Danahaer, the biggest threat of algocracy is how it obscures the legitimacy of public decision-making and weakens the legal accountability of the state (Danaher, 2016). These risks seem evident, especially with the deployment of machine-learning algorithms. Even in the case where the final decision is taken by a

human being, with the algorithm merely providing recommendations, the civil servant will, in most cases, be unable to both understand and explain why the algorithm made such recommendations. Moreover, if a civil servant disagrees with the algorithm, will they have the confidence to override the algorithms' decision? In Poland, a scoring system deciding the benefits for the unemployed was employed initially as an advisory tool. However statistics showed that the servants were only overriding the results in 1 out of 100 cases. Some of the servants mentioned time constraints as a reason. They also feared potential repercussions from their supervisors if a specific decision would be pulled into questioning at a later point in time. Thus, regardless of if the final decision has been made by a human or an algorithm, it will become nearly impossible for courts to hold governments accountable for their decisions, as the decisions will not be transparently reasoned. (Penner & Algorithm Watch, 2019b) (Bailey, 2016; Liu & Mchangama, 2018)

While digital governance is weakening the state's accountability to the citizens, the citizen's accountability to the state increases and citizens are to a greater degree treated as applicants for welfare benefits rather than right holders. Citizens have to prove to decision-makers (may they be algorithms) that they are deserving and fit the eligibility criteria. Without personal contact and manual assessment of client cases, the opportunity for individual assessments in cases that do not fit the standard criteria is significantly reduced (Mattsson, 2016). The rigidity of a digital system does not take into account real-life situations. In the case of increased use of big data and artificial intelligence, citizens are left un-knowing what their actions might suggest in the eyes of the algorithms and what consequences that will have. Thus, having a substantial impact on the freedom of citizens, freedom of speech, movement, and expression – and the right to personal privacy. (Alston, 2019; Liu & Mchangama, 2018)

Artifacts have politics, and technology is not neutral - it enables certain behaviors and experiences but excludes others (Winner, 1980). Consequently, digital governance will benefit some but definitely disadvantage others.Limiting certain groups of people access to participate in society and the right to wellbeing benefits, will have detrimental effects on the social citizenship of those affected. Accountability issues can disintegrate the trust in society – the trust citizens have in the state, the state has to the citizens, and even the trust between and among citizens themselves, one of the key values of the Nordic Model (Jerpseth et al., 2020). Ultimately, the era of digital governance is threatening the building blocks of a well-functioning democracy.

3. Design approach

3.1 Speculative design overview

And how can we prevent the introduction of technologies at odds with the kinds of personal habits, social relationships and institutional patterns needed to sustain the civic culture of democracy? (Winner, 1995)

In 1995 Langdon Winner called for a new practice situated somewhere between the work of designers and political scientists. Annoyed by the material ignorance of political scientists and the a-political attitudes designers, architects and engineers had to their work, Winner asked where the regard to socio-political implications of design was. He named the practice "political ergonomics", a study of how (material) structures, designs, and technologies fit with the moral, social and political landscape we would prefer to live in. (Winner, 1995)

Speculative design is an approach to design focused on examining the cultural, social, and ethical implications of new technologies (Mitrović, 2015). A practice that uses design as a medium to ask "what if" questions to open debate and discussion about what kind of futures we want (and do not want), not too dissimilar to the political ergonomics Winner had urged for. The origins of the speculative design term have primarily been attributed to the work of Anthony Dunne and Fiona Raby, especially due to their book "Speculative Everything" (2013) that outlines their take on critical and speculative design practices. In 2009 the duo published the A/B manifesto, positioning (B) "critical design" as something opposed to "affirmative design" (A) – which definition places most of the traditional design practices within its category. Affirmative design is defined as problem solving, providing answers, for how the world is, and to make us buy. Critical is defined as problem finding, asking questions, for how the world could be, and to make us think.

"Critical design uses speculative design proposals to challenge narrow assumptions, preconceptions and givens about the role products play in everyday life. It is more of an attitude than anything else, a position rather than a method." (Dunne & Raby, 2013)
Today, speculative design is related to and often overlaps with a series of similar design practices known under different names: critical design, discursive design, adversarial design, design fiction, design futures, design for debate, anti-design, etc. (Dunne &

Raby, 2013; Mitrović, 2015). There is much overlap between these practices, and terms are often used interchangeably, with the choice of the term subject to context (Auger, 2013). They all describe practices that use design as a medium, or at least as the focus of inquiry, to question the world we live in and how it could be in the future. Speculative design does not aim to predict the future but rather create imaginations of potential futures and present them in formats that make them more familiar to the present.

The format of speculative design is as wide as traditional design practices today – from material products to digital interfaces, business models, and service blueprints. However, as the world-building and narrative qualities of speculative design are considered the main focus of the practice – what kind of world, social norms, and political structures do such products and services signify. Thus, speculative designers often borrow tools from other mediums such as video, text, installations, and even enactment and roleplay.

3.2 Design for design's sake - what debate, and for whom?

The speculative design approach has grown in popularity in the past 20 years, and while gaining more traction, it has also garnered a fair amount of critique (Bardzell & Bardzell, 2013; Bardzell, Bardzell & Stolterman, 2014; Blythe, 2014; Blythe, Yauner, & Rodgers, 2015; Martins, 2014; Prado & Oliveira, 2015). First and foremost, for being elitist and "design for design's sake". By coining the term and spearheading the practice, Dunne and Raby have significantly impacted on how the field has developed. Their speculative design practice has primarily been centered around creating speculative artifacts and presenting them in "white cubes" - academic settings, museums, and galleries. In their book Speculative Everything from 2013, they describe what they perceive as a successful speculative design; *"Somehow these objects, scenes, characters, interactions, and activities must appear 'real' but gently signal that they are not"* (Dunne & Raby, 2013, p. 96). This "slight strangeness" or what Mollon and Gentes (2014) call "uncanny enough" - a perfectly balanced combination of familiarity and unfamiliarity – should trigger an emotional uneasiness, ideally sparking engagement in the form of thoughts, concerns, questions, conversations, and debate. Dunne and Raby consider this to be the main quality of critical and speculative design that makes it distinctively different from art. "*Critical Design needs to be closer to the everyday, that's where its power to disturb comes from."* (Dunne & Raby, 2013, p. 43) If the design is too weird and it will be dismissed as art, one the other hand, if it is too normal it will be effortlessly assimilated. (Dunne & Raby, 2013)

However, “just art” is exactly what speculative design is often perceived as. The designs are made to be deliberately “hard to read”, often resulting in resting heavily upon intellectual stimulation, visual cues, and narration such as lengthy texts to be understood. The ambition of speculative design is to provoke debate and discussion about the worlds we want to live in. In “The Context of Critical Design: Exhibits, Social Media and Auction Houses”, Blythe, Yauner, and Rodgers (2015) seek to enlarge the audience of critical design by bringing it to the masses via social media sites such as Vimeo and YouTube. By investigating site statistics of three critical design projects uploaded to YouTube, they describe how “design for debate” might work in these contexts. However, although viewing figures for the videos are high, the comments (“the debate”) and engagement with the videos are relatively superficial, with many of the comments being textual forms of laughing, such as “Haha” and “lol” (Laughing Out Loud) (Blythe et al., 2015). If the designers intended to “design for debate” and that debate fails to prevail, is that not a faulty design? Cameron Tonkinwise, design studies expert, hits the nail on the head in his text “Just Design”, clarifying that debates are hard to design and do not merely arise as a result of some designed artifact. He argues that actual “design for debate” is when *“Designers take responsibility for designing a debate, running a debate and following through on the decisions that emerge from the debate.”* (Tonkinwise, 2015)

As most early practitioners have been from white, western, academic backgrounds, unsurprisingly, the narratives represented have mainly been from privileged perspectives. In 2014 a discussion in the comment field on MoMa’s Design and Violence page prompted Luiza Prado and Pedro Oliviera to write a text “Questioning the “critical” in Speculative & Critical Design”. The project that had spurred the debate was Burton Nitta’s “Republic of Salivation,” a pessimistic future scenario in the case of global food shortage. Prado and Oliviera point out, while the topic might be dystopian for some, it has been the lived reality for decades in other parts of the world. Thus, calling attention to the more significant issue of speculative design has tended to only consider issues that concern the intellectual white middle classes, and projects have often been entirely devoid of people of color and questions of class and gender issues. (Prado & Oliveira, 2014) If the ambition of speculative is to challenge the status quo and “design for debate” – whose debate is it, where, and how does it materialize? Who are at the table to discuss which futures are desirable?

3.3 Speculative design in the real world - moving beyond the white cube

Despite the critique the speculative design approach still holds many possibilities, especially in the light of the increasing body of work with speculative design methods used in real-life contexts.

In “Anti-Solutionist Strategies: Seriously Silly Design Fiction”, Blythe, Andersen, Clarke and Wright (2016) describe a practice that uses speculative design as a design research tool rather than an outcome in itself. In the context of a city planning project to enable more effective engagement between the public and local councils, the team ran two “Magic Machine” workshops where the participants made lo-fi prototypes out of basic materials like cardboard, string, plastic, and glue. The creation of the machines, which were entirely based on imagined technologies and deliberately not realistic, enabled the participants to *“think through their hands”* and articulate worries and desires of a hypothetical future of their neighbourhood. (Blythe et al., 2016)

Similarly, Masafumi Kawachi (2020) invited citizens to create future objects as a co-speculation exercise in his master’s thesis “Enabling Citizens’ Speculation”. In collaboration with the civic-tech organization Community Link, Kawachi organized a workshop where citizens imagined how future technology could contribute to a meaningful and good life for the elderly. The act of collaborative making allowed the citizens to “envision in an empathic, experiential and embodied way, leading to deep reflection and activated dialogue.” (Kawachi, 2020)

The future of aging was also explored by Darby, Whicher, Tsekleves, & Turner (2015) in their project Protopolicy. The project aimed to investigate how design fictions could be used to negotiate political questions and help politicians and community groups imagine the future implications of policy initiatives. Through a series of co-design workshops with elderly citizens, the team developed two speculative concepts; Soulaje and the Smart Object Therapist. Soulaje is a self-administered euthanasia wearable and the Smart Object Therapist helps people work better together with their smart home objects. Videos and prototypes were designed to present the concepts to citizens and politicians to elicit response and discussion. The researchers found that the design fictions were extremely effective in prompting a debate on the societal, legal, and ethical implications of the concepts. Furthermore, the prototype-quality of the designs enabled people to share thoughts about ethically complex issues without having to be too definite (Julier & Kimbell, 2016). Finally, the co-design workshops worked as a way to facilitate citizen participation in policy design processes. (Darby et al., 2015)

Just like in Protopolicy, Policy Lab in the UK utilizes speculative design to provoke discussion and gain insights from citizens. By presenting possible futures, they aim to surface questions and concerns about those potential realities. In collaboration with speculative design studios Strange Telemetry and Superflux, as well as their own in-house designers. Policy Lab organized workshops and discussions with citizens and industry stakeholders around subjects like the future of open justice and the future of data. (Policy Lab, 2016b; Policy Lab, 2019) Policy Lab even identified Speculative design as the number one policy prediction for 2017, stating that *"More policy makers will look to speculative design for answers."* (Policy Lab, 2016a)

Bringing speculative design to the real world also means bringing it to the decision makers. Policy Lab announced that they are now exploring how policy makers can use speculative design themselves, not only to collect responses from the public (Policy Lab, 2019). In the workshop "2030 – An Ecosystem Odyssey", design researchers Yiying Wu, Sus Lyckvi, Virpi Roto, and Maria Huusko used speculative design and design fiction in a workshop to question "What is fair shipping?". The workshop was part of the research program DIMECC Design for Value (D4V), which explores door-to-door supply chains, autonomous systems, and new technologies to create business growth through digital disruption. In the workshop, the designers used design fiction to focus on social and ethical aspects that the changes automation will bring to work life. In particular, they challenged the company representatives and researchers to focus on the workers' experiences, as they had not been given much attention elsewhere in the research project. (Huusko, 2018; Wu et al., 2019)

In "2030 – An Ecosystem Odyssey", the designers had only used text to present the design fictions - alternative futures - to their participants. Afterward, they reflected on how using different mediums could be more engaging and create more impact. *"Different formats, like videos, could help in making the fictional scenarios more real and existing, while role play, including the participants could make the discussion on societal values more prominent and personal."* (Huusko, 2018, p. 65)

3.3 Live Action Roleplay

Live Action Roleplay; larp* is a role-playing game for a first-person audience - a sort of theatre play without a script or an audience. In a larp, players relate to a fictional world by physically portraying their fictional characters; in other words, playing make believe. The

*The word larp was originally an acronym, but is commonly used today as a name and word by itself.

power of role play and larps have been studied and documented repeatedly. Although larp is mainly seen as a form of entertainment, it is also used for education, therapy, work training, and political activism. (Alderman, 2015; Koljonen, Grove, Skjønsfjell, Nilsen, & Stenros, 2019; Reith-Banks, 2018) However fictional a larp may be, the experiences, emotions, and actions in a larp are very real. These experiences are bodily, and the endorphins and the adrenaline are genuine. (Stenros & Montola, 2010)

Bodystorming and role plays are widely used design research methods for ideation and user testing. Either as “embodied prototyping” to feel what a particular movement and action would feel like or to test out and represent intangible designs such as service and organizational designs. Although one of the main motivations behind using these methods is to gain empathy with the user, the role plays are, for the most part, focusing on interactions between the user and the design. (Koskinen, 2011) Questions of how social, cultural, and power relations play into the interaction with the design and the rest of the world are rarely, if ever, considered.

Eleanor Saitta, a security systems architect and active larper, sees larps as particularly useful to investigate emerging complex systems. She argues that they are especially effective in exploring people’s emotional relationships with systems and as a tool to represent social scripts and collectively redesign them (Saitta, 2016). *“We have traditional prototyping tools to make not-yet-existing systems functionally real, but we need embodiment to make them emotionally and socially real.”* (Saitta, 2016).

Unlike service design role plays, the focus of larps are not the specific actions in a user journey but on experiencing this alternative world, the fictional characters and the power relations between them. For most larps, the social networks create most of the tensions and storylines - you cannot play a queen without peasants, servants, or worshippers.

Larps are similar to speculative designs as they portray alternative realities for players to explore and examine. Also, larps are a natural tool for studying questions such as what kind of a world is possible or what the world should be. However, they have not been commonly used within the critical and speculative design field. Some sociologists suggest that our knowledge of how to function in society may be embodied (Fourcade, 2010). Thus, if the objective is to investigate socio-political implications of emerging technologies and potential futures, how else than with embodiment?

13-16. December 2018, the State of the Larp conference was organized in Oslo gathering more than 60 larp, theatre and role play enthusiasts that believe larp can raise critical issues and promote

social change (Larpwriter summer school, 2018). One of the main topics of discussion during the conference was how to utilize larp to promote social change. For instance, larps can be excellent for attracting attention to critical issues through media coverage or organizing larps in public spaces - similar to street theatre. Nevertheless, while the conference participants all agreed that larps can be both impactful and transformational, it is mainly happening on an individual level. The superpower of larps is the experiences, thoughts, and feelings the player has when playing in the larp. Therefore, there was raised a wish for “getting larp to the right people”, meaning people with power. Having politicians experience their policy reforms, for instance, by having them play a larp about being an asylum seeker. Creators of digital systems are also people with power - creating the services and systems that surround and mediate our everyday life.

One of the main objectives of the case study was to encourage reflections about socio-political implications of the Finnish digital public sector and the work of DVV amongst the employees of DVV. As mentioned in chapter 1, the intention was that by exploring these issues, potential unintended consequences could be accounted for and perhaps even avoided. Thus, larp was chosen as a method and medium because of its potential to be impactful and engaging in order for the reflections to have an impact on their continued work. Furthermore, as speculative design has been criticized for being too concerned with both technology and aesthetics, using larp as a method shifts the focus on to more emotional, cultural and political dimensions.

4. Case study - Aalto Thesis Project for Finnish Digital Agency

4.1 Project overview

The work described in this thesis was part of the Aalto Thesis Project for the Finnish Digital Agency. Aalto Thesis is a program organized in the Teaching Lab in Aalto University as a part of the national Work-Integrated Pedagogy in Higher Education (WORKPEDA) initiative. The aim of the program is to promote work-life collaboration between students and organizations. The program is project based, forming multidisciplinary teams of 2-4 students that work together to solve a challenge for the partner organization while also completing their individual thesis work. The student team for this project consisted of Fiona Kristina Kaihari (MA International Design Business Management), Christopher Kannaday (M.Sc. Management and International Business), Nandakumar K. S. (M.Sc. Information and Service Management), and Ming Unn Andersen (MA Collaborative and Industrial Design).

The project challenge was issued by the former Population Register Center, currently the Digital and Population Data Services Agency (Finnish Digital Agency or DVV). DVV is the Finnish public sector's digital services developer and a supporter of other public operators. The agency aims to continually reduce the client's need for face-to-face services by developing smart digital solutions and is eager to develop a consistent user and service experience in the public sector digital services. Additionally, the national law on offering digital services obligates authorities to provide citizens with a consistent, customer-oriented, and safe digital way of interacting with authorities. Through the project deliverables, DVV aimed to understand areas to improve and identify processes to provide a consistent experience for its users and acquire valuable insights to become the best public digital agency in the world.

The project started in November 2019 and was completed in May 2020. All thesis group participants had unique approaches to the challenge at hand. Nandakumar focused his work on the design system process tailored to the public sector, and Kannaday researched the effect of employee procurement strategy on innovation output. Meanwhile, Kaihari evaluated how branding

affects the end-user experience of digital public services.

The research process for this thesis included three stages: first, the background research involving three interviews with DVV employees and extensive desktop research; second, a design process developing a speculative future vision of the digital public sector; and lastly, a speculative design workshop including a larp. The development of the workshop included a 1.5-hour long test-run with four participants. After, the learnings from the test-run led to adjustments in the workshop plan. The final three-hour workshop was held at the DVV headquarters on the 25th of February 2020. There were 11 participants in the workshop, nine DVV employees, and three students from the Aalto thesis project team. The DVV employee participants were invited based on their involvement in projects related to the workshop topic. The workshop was facilitated by myself with the help of two assistants, Juuso Karvonen and Hala Menassa, providing support with practicalities, taking notes, and documenting the workshop. The research aim of the workshop was to test out speculative design and larp as a method for exploring and facilitating debate about socio-political implications in the digital public sector.

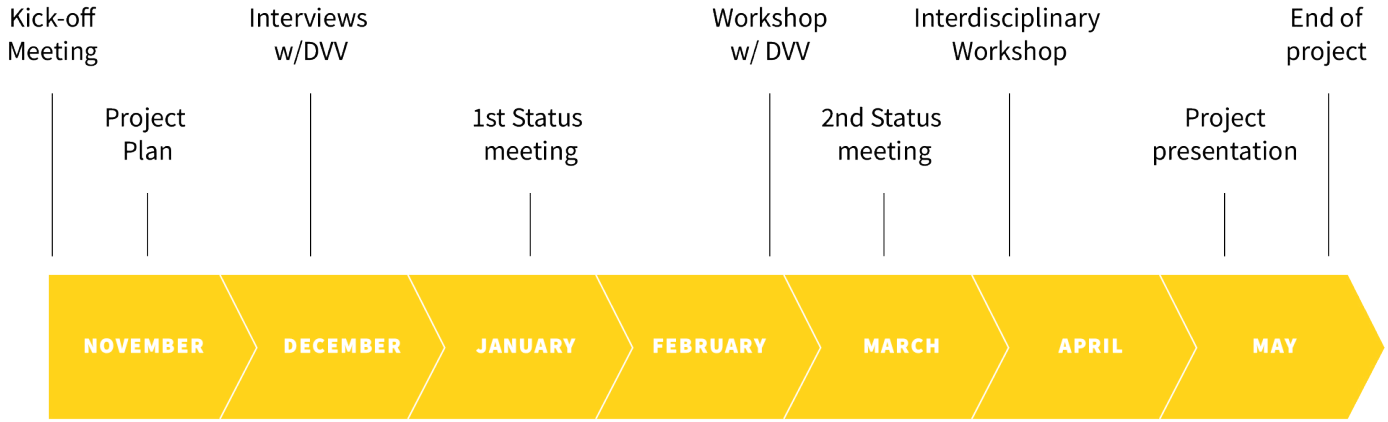


Figure 1 - Aalto Thesis Project schedule

4.2 Background

4.2.1 Digital governance in Finland

January 1st, 2020, the Population Register Centre merged with the local Register Offices to form the Digital and Population Services Agency (DVV). The objective of the agency is to promote the digitalization of society, secure the availability of data, and offer services for customer's life events. The agency has over 800 employees, operating in 36 towns all across Finland. DVV serves citizens directly through end-user services and supports other public operators in digital service development, making the agency's projects and activities manifold and varied.
The following section provides an overview of some initiatives DVV is responsible for. Other public organizations and Municipalities in Finland are all managing and developing their own digital services. For instance, Kela, the National Social Insurance Institution, Tulli, the Finnish Customs, and the city of Helsinki are all currently of developing distinct design systems. Thus, the projects described below are only a tiny part of the whole e-government landscape in Finland. However, based on the work of DVV, it is clear that they are working towards increasing connections between the different public sector organizations and working towards the one-stop-shop (or even no-stop-shop) model.

Suomi.fi
Suomi.fi is a national web service with information and services for different life events for citizens and companies. The service collects all available public services in one place for citizens and companies to deal with their matters. Information and services are organized according to life events such as "Purchasing a home" or "Having children". It is organized in a similar manner for companies and organizations – "Recruiting an employee", "Launching business operations". In addition, Suomi.fi also includes a messaging service for communicating with authorities, e-authorizations to grant another person or company to act on one's behalf, and the possibility to check the information saved about oneself in national registers. (Suomi.fi, 2020)

Suomi.fi for services for organizations
Elements of the Suomi.fi web service are available for public organization administrations to improve their digital services. The Suomi.fi services include Finnish Service Catalog, e-Identification, Maps, Payments, Data Exchange layer, e-Authorizations, and Messages. Some of the services are can also be accessed by the private sector. (DVV, 2020c)

Suomi.fi Data Exchange layer

The National Data Exchange layer provides reliable data transfer between the different public sector and private organizations. It is a standardized and secure data transfer channel allowing information transfer between different data systems. (DVV, 2020) The Data Exchange Layer is based on the Estonian X-road technology that the Estonian Information System Authority launched in 2001 (NIIS).

Service catalog

The Suomi.fi Finnish Service Catalogue is a centralized data repository in which organizations provide information on their services and service channels. The Service Catalogue is mandatory for all public organizations to contribute to and update, hence working as a directory for all the public services available in Finland. It is also open for private organizations to use; however, there are still relatively few private actors using the service (Kervinen, Interview, December 11, 2019). The content of the Finnish Service Catalog is public, and the open data may be used for various purposes both in public administration and the private sector. (DVV, 2020)

Suomi.fi Design system

DVV develops the Suomi.fi design system to accommodate their development of the Suomi.fi services. Accessibility and universal design have been at the center of the design of the system. The design system is open source and available for anyone to use. It includes a style guide with colors and type fonts and standardized information organization structure and interaction points. (DVV, 2020b)

Interoperability platform

The Interoperability Platform promotes the interoperability method, providing tools and processes for creating and maintaining interoperable data content. The platform is part of DVV's commitment to following the European Commission's incentives of implementing the Once Only Principle. Intended for both public administration and private sector organizations, the platform aims to create universal models of defining and managing information. Glossaries, code sets, and data models are available on the platform free of charge; however, one must apply for a license to access the platform. (DVV, 2020a)

Aurora AI

Aurora AI is the national artificial intelligence (AI) program initiated by the Ministry of Finance in May 2017 to ensure that Finland becomes a frontrunner in applying artificial intelligence. The program's initial goals were to generate a snapshot of the current status of AI activities in Finland and around the world, propose a goal state of how Finland should utilize AI through cross-sector

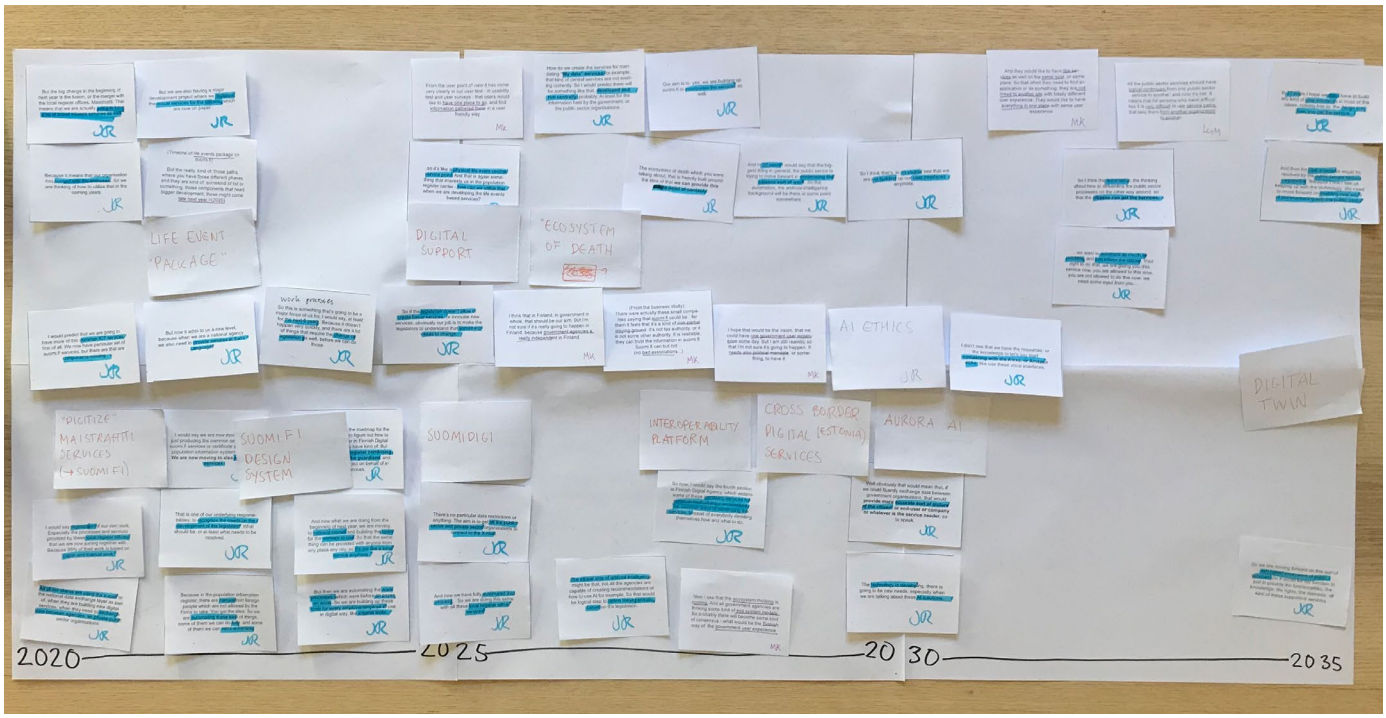
collaboration, and develop a model for implementation of measures to achieve the stated objectives. (Ministry of Economic Affairs) The project is implemented through broad cross-sectoral cooperation, with a network of more than 330 members. DVV's responsibilities in the Aurora AI project involve maintaining core services required by AuroraAI, such as service directories, natural language analysis (intention recognition), and authorisations. (Ministry of Finance, 2019)

4.2.2 Timeline

In order to get an understanding of where the Finnish digital public sector could be headed based on the current situation, projects, initiatives, technologies, and attitudes, a timeline was created incorporating the information gathered from the interviews and desktop research. The timeline included transcript excerpts from interviews with comments regarding current services and projects, as well as wishes and thoughts from users and DVV of services they think would be needed in the future.

It should be noted that the research was focused on the work of DVV and associated (such as Aurora AI). However, the digital public sector in Finland consists of many different actors. Therefore, the combined effort of all these actors will define the future of the digital public sector.

Figure 2 - Creation of timeline with quotes from interviews



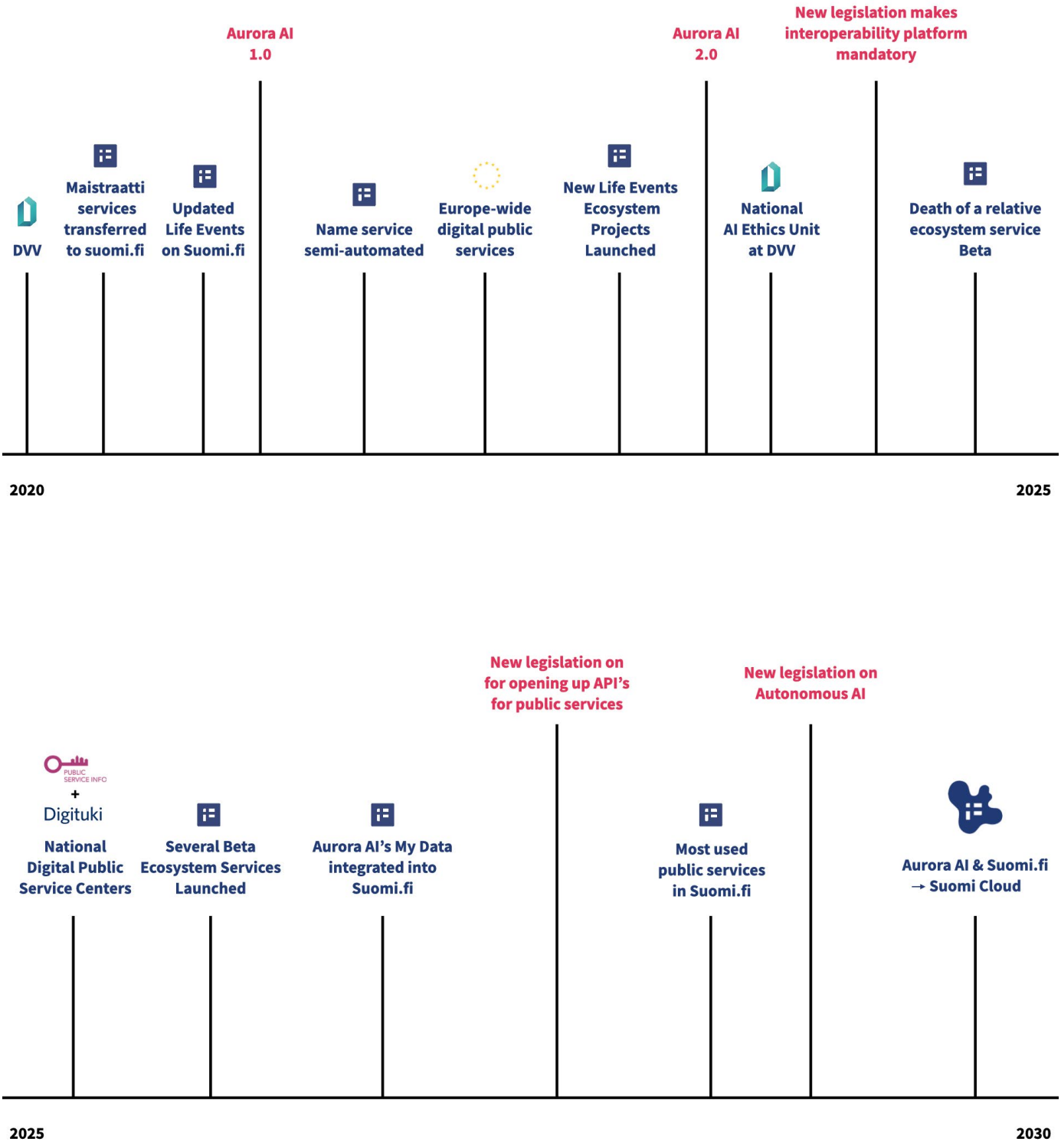


Figure 3 - Final speculative timeline presented in workshop

The focus of this project has been on understanding what kind of digital public sector DVV is working to achieve. While there is no official vision of what the digital public sector should look like in 10 or 20 years, as the new Finnish Digital Agency, the vision DVV is working towards will set a president for digitalization of the whole for Finnish society and the digital public sector in particular.

4.2.3 Tensions

By combining the research on e-government trends and socio-political implications of the digital public sector, four key tensions were identified to explore further. The tensions combine desirable features or benefits from digital public services with corresponding potential disadvantages or undesirable implications.

1. Cohesive user experience vs. Lack of contextual service

The Suomi.fi design system has been developed mainly due to DVV's need to streamline its development process. However, there is also an underlying long-term ambition to create cohesive user experiences across the Finnish public sector based on life events. Users have expressed a wish to have all public services collected in the same portal, with the same service patterns and user experience. The cohesive user experience of digital services has mainly been necessary concerning accessibility, for instance, for the blind and poor-sighted. Having a clear user path and a menu system that works well together with, e.g., text-to-speech software, is central to the Suomi.fi design process (Kervinen & Stening, interview, December 17, 2019).

However, a cohesive user experience could also mean a lack of contextual service delivery. Regardless of emotional significance or practical complexity, all life-events become categorized, universalized, and reduced to a step-by-step user manual. User-friendly, transparent, accessible, easy! In the case of the citizen service centers in Denmark, the service personnel was no longer required to be specially trained and unable to provide context-sensitive advice. On the contrary, the focus was on the digital service instead (Schou & Pors, 2019). Many tend to have varied experiences and emotional attachments to different public agencies. For example, users have expressed negative experiences with the use of Kela and Vero and positive associations with the local register offices. When the Population Register Centre merged with the local register offices, Maistraatti in Finnish, protests emerged as couples realized they could no longer get married at the "Maistraatti" – which has a significant cultural meaning in the Finnish context. Instead, they now have to have their ceremony conducted at the Digital and Population Data Services Agency (Patakangas, 2020). Having a unified interface for digital public services for all types of life events raises questions of whether negative associations will overpower positive ones.

2. Efficiency and ease of use vs. Divide in user experience
Efficiency and ease of use are some of the main benefits and drivers of digitalization. Digital documents are far faster to handle than their paper equivalent. Moreover, incorporating automation in public services can cut decision-making timelines from several weeks to a few minutes or even seconds. While considering the implications of digitalization, further marginalization of those already marginalized is a reoccurring topic. The arguments being that those already marginalized might lose access to services because they cannot access digital services, or it becomes much harder for them to access, as digital self-service solutions are not fit for their life situations. There is one more issue: even if the service delivery for those with no digital skills remains the same (in person, through phone, and paper), the service delivery gap between those using digital services and those not using them widens.

For instance, in the case of automating the national name changing service: currently, all name change applications in Finland are handled manually and take about 1-3 months to process, regardless of what kind of name it is and who is applying for it. Many name changes are pretty straightforward, and the process would be much more efficient using an automated system. Many name changes could be approved straight away, without any waiting time. Still, those names that fall outside the standard norm will have to wait for manual processing time. Consequently, increasing the service delivery difference between those who fit within the norm and those that fall outside immensely.

3. Proactive "flow" of services vs. Accountability of the state
Said to be efficient and cost-saving, automated processes and proactive services are the next frontiers in e-government services. *"Why would we have people do all these manual processes? It's just common sense!"* (Ruuskanen, interview, December 3, 2019)
Saving time, money, and effort, making life easier for both the state and the citizens, sounds like a dream come true.

However, as argued in chapter 2.2, when algorithms do decision-making processes, the accountability of the state weakens. With machine-learning algorithms, it becomes harder to understand the basis and reasoning of a made decision. What will be the legal processes for a case appeal when the case has been handled by an algorithm and not a human being?

4. Consistent and transparent steps vs. Real life is messy
Public sector digitalization and e-government development have, in recent years, seen a surge in user-centricity. Digital services should only save time and resources for the governments but also serve the citizens well. Part of this is to design digital services with consistent and transparent service steps that keep the user in the loop of

where in the process they are and what actions they need to take next.

While consistent steps might be helpful and practical, the rigidity of a digital system does not always take into account the “mess” of real life. One such example is the process of filling out or uploading information to forms and applications. In the application form for Finnish citizenship, the applicant is asked to fill out information about their parents. In particular, this includes name, date, place of birth, nationality, and potential connection to Finland for both maternal and paternal parents. Options for including two maternal or paternal parents or marking one parents’ information as “unknown” do not exist. Furthermore, the digital application cannot be sent without filling out the existing fields.

4.3 Design process: Speculating on the future of Finnish digital public sector

The tensions and the timeline worked as a basis for the overall speculative design. The timeline acted as a base for the general vision for the future digital public sector and the tensions as inspiration for scenarios and implications to explore in the workshop. The year 2035 was chosen as the focus for the speculative design, partly because development in the public sector is relatively slow. Partly because the year is a modifier in itself, it “sounds” really far ahead – 15 years is a long time, firmly placing the speculative design in a distinct future and not a near present with all sorts “present-world” challenges.

However, the 2035 vision itself does not focus heavily on novel technologies or technological advancements. Instead, it is built on already existing products or ongoing projects – with the premise being that these emerging trends, technologies, and services, are common everyday practice by 2035. The first and foremost goal was not to explore novel technologies and concepts but rather socio-political implications of the work that DVV is doing today, 15 years from now. Therefore, based on the technological landscape in the vision, the chosen year could as well have been 2030 or even 2025.

The vision is a proactive digital public sector with one single interface for citizens to access. More and more data are collected about the citizens through many different sources (as the digital public sector is provided through a myriad of public-private collaborations) to provide personalized, proactive (or even predictive) services. It was designed neither as a utopia nor a dystopia. While dystopic and utopic visions have their purpose of

visualizing futures to avoid or futures to strive towards, they are also criticized for being removed from reality, providing little incentive for action. Thus, this project aimed to elicit a response within DVV by creating a sense of responsibility for the future. To avoid the vision being easily dismissed as “unrealistic,” and consequently, the implications dismissed as “irrelevant,” the vision was kept close to reality. The following section 4.3.1 describe the 2035 vision – Suomi Cloud, and some of the details included in the design.

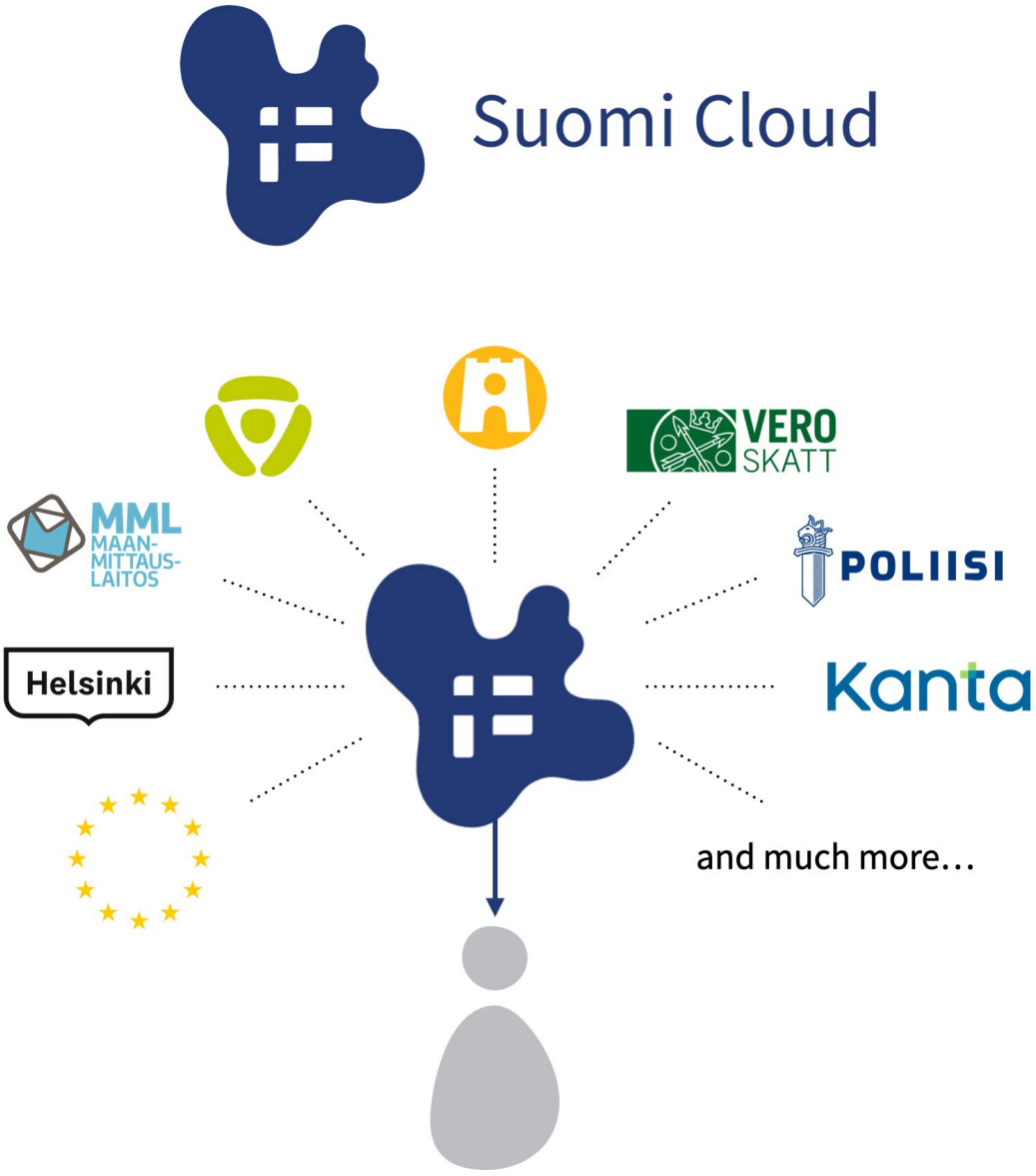


Figure 4 - Suomi Cloud logo and concept visualization

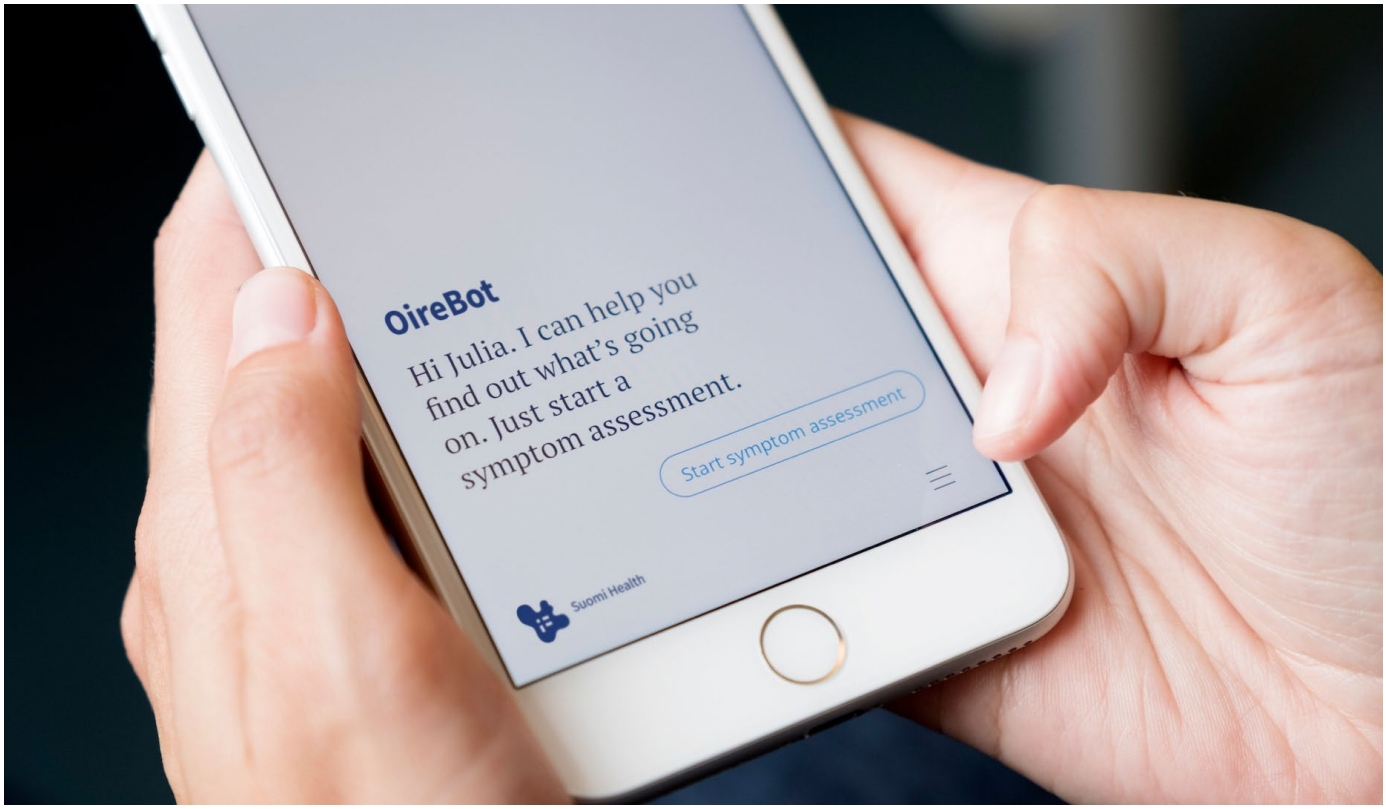


Figure 5 - OireBot interface from the mid 2020s

4.3.1 Suomi Cloud

In 2035 the services are provided to citizens proactively through one single user interface - Suomi Cloud. Suomi Cloud is the national public service platform and interface. It connects all traditional public service organizations such as Kela, Vero, municipality, and health services, as well as private organizations collaborating with the public sector. Minimizing the work for the citizens, powered by the Aurora AI system, Suomi Cloud proactively monitors and predicts when services are needed and administers them accordingly.

Suomi Health

From a voluntary symptom checker in the early 2020s, the OireBot has become the main entry point for the national health service. OireBot is a self-assessment tool that helps determine the need for professional medical attention or if self-care is sufficient. OireBot will provide advice on self-care or book necessary health care appointments and distribute medicine prescriptions and delivery. The OireBot interface started as a web-based chatbot but has since been developed to include both voice UI and VR/AR that includes the possibility to use sign language.

Suomi Health x Oura Ring

Connecting health trackers to your Suomi Health account is common practice in 2035. The health trackers are part of the national health initiative of preventative health care. The health

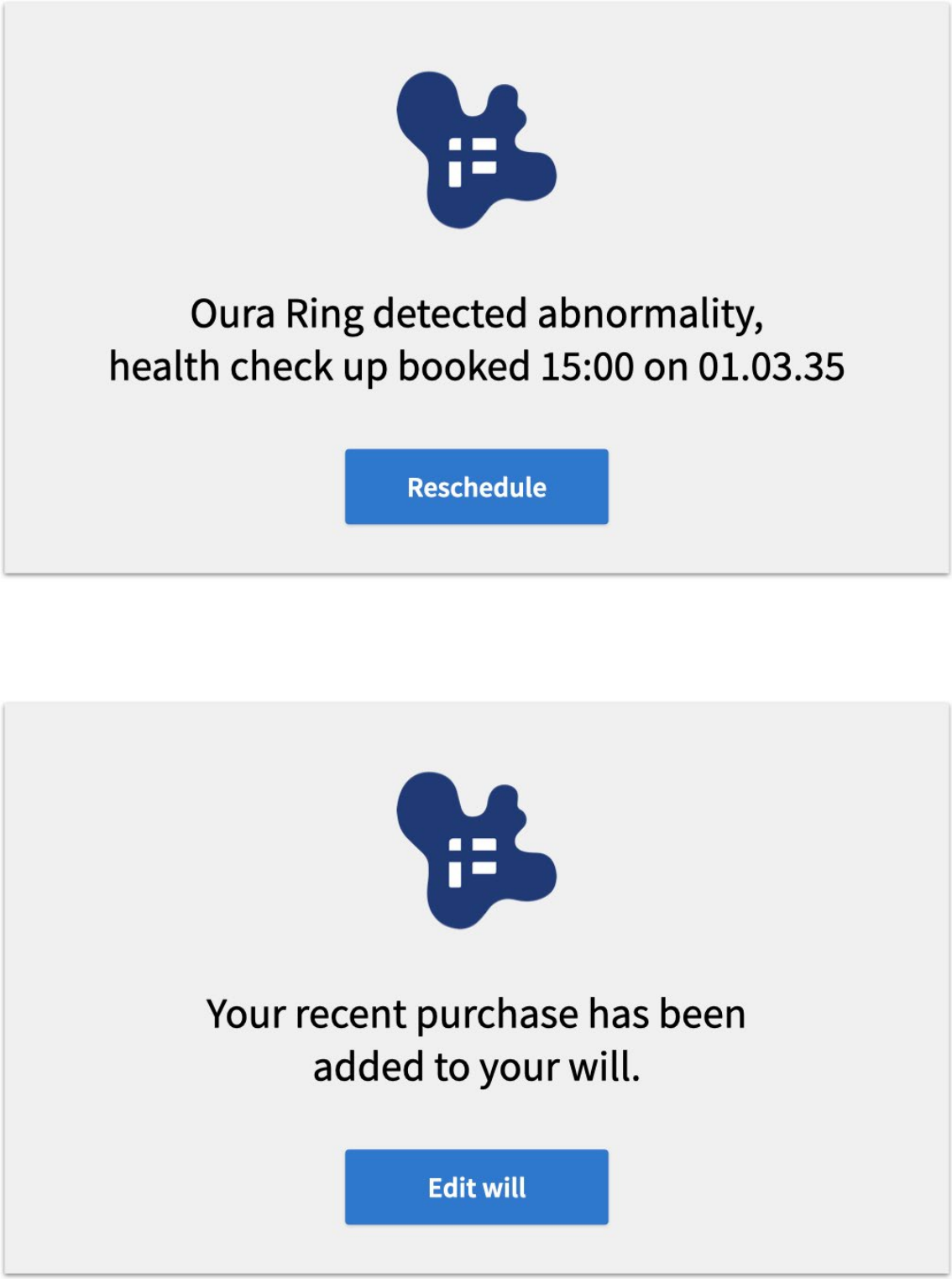


Figure 6 - Suomi Cloud notifications

trackers will assist with booking health appointments as needed, without having to consult the OireBot. They also provide an easy solution for tracking and reporting treatment and exercise programs issued by Suomi Health. With a health tracker connected to Suomi Health, citizens can get personalized recommendations for activities and services that are suitable for their body type and condition.

There are many health trackers that are compatible with Suomi Cloud, e.g., FitBit, Apple Watch, and the Finnish Oura Ring. However, the Oura ring is one of the most accurate health trackers as it can track heartbeat and body temperature. Therefore, with an Oura ring, you are not only exempted from the most repetitive questions of the OireBot, but the ring will also automatically call for an ambulance if needed. In 2033 Suomi Cloud entered an agreement with Oura to provide government-funded Oura rings to those in need but without means to purchase their own.

Suomi Cloud MyData

The MyData wallet was already integrated into Suomi.fi in 2027. It has since been expanded to include many hundreds of data sources as Suomi Cloud has expanded its integrations with third-party service providers. It is a legal right for each citizen to be in charge of their own data, and they can easily manage it all in the Suomi Cloud MyData application.

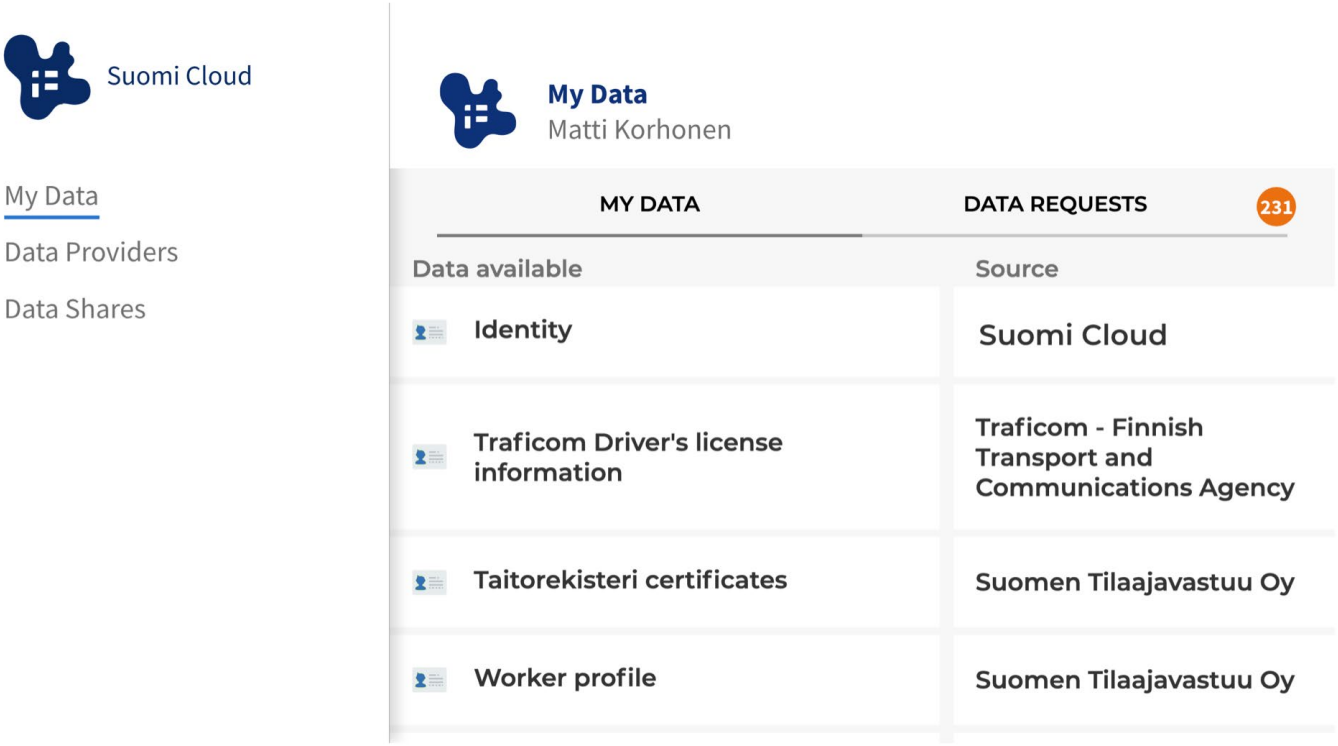


Figure 7 - Suomi Cloud MyData interface

Enkeli + Digital fasting

In 2035 the digital fasting trend has gone mainstream as a self-care routine; this has led to long queues on the Suomi Help Phone lines. To keep up with official matters, some have resorted to hiring PDAs (Personal Digital Assistants, nicknamed “Digital Angels”) while going on a longer detox. PDA platforms such as Enkeli started popping up in the late ‘20s after Suomi.fi had launched the new guardian base register allowing guardians to act on behalf of their wards in digital services. The platforms connect those in need of digital assistance with trained and vetted PDAs. Now Enkeli has experienced a surge in clients not lacking in digital skills but wishing to go on a digital detox while not having to worry about missing anything important in the digital sphere. An increase in digital addicts going on digital detoxes has forced Suomi Cloud to enter a subcontracting agreement with Enkeli to provide PDA’s for digital addicts who cannot afford it themselves.

4.3.2 The larp – Citizen Feedback Session

While the Suomi Cloud vision acted as a general description of how the future digital public sector would potentially function, the socio-political implications were the focus of the workshop. These were presented and explored through a larp, where the workshop participants acted as future citizens and users of Suomi Cloud. The tensions described previously were translated into scenarios of user experiences for the characters in the larp.

Figure 8 - Enkeli advertisement

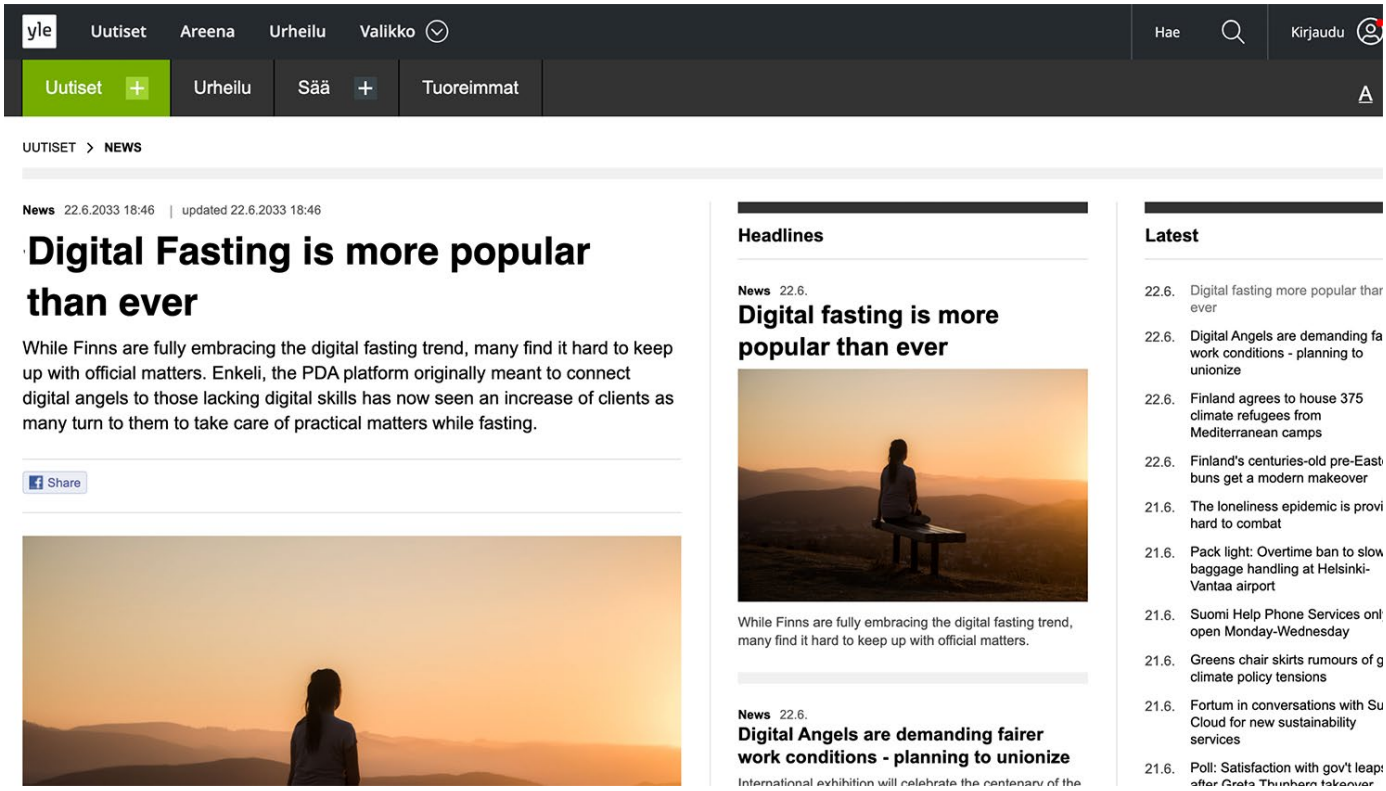


Figure 9 - Speculative newspaper article from 2035. Showcasing digital fasting.

The setting for the larp was a citizen feedback session in 2035. The setting was chosen to keep the set-up and preparation requirements to a minimum by matching the fictional setting of the larp to the physical workshop setting. Some larps have elaborate scenography, props, and costumes that take months to prepare, while others only use tape on the floor to indicate a different room or improvise objects as props. As the purpose of this larp was to engage the participants with the Suomi Cloud vision, especially to explore the socio-political implications, it did not seem natural to focus too much energy on scenography or props. Also, it was not desirable to make the suspension of disbelief a too strenuous exercise for the participants. It was essential to choose the fictional setting of the larp in a still relatably familiar setting for the participants. If the fictional setting of the larp were utterly different from the reality where it took place, such as a family visiting the beach on vacation, it would require a significant amount of cognitive energy for the participants to imagine and act as if it was real.

Hence, the citizen feedback session allowed for a believable larp setting without adding much in terms of scenography, props, or costumes. The fictional setting also made it natural for the characters to speak about their experiences with Suomi Cloud to share negative and positive experiences, wishes, and worries.

4.3.3 The characters

In the book “Larp Design”, the larp characters are defined as the interface between the player and the larp (Koljonen, Grove, Skjønsfjell, Nilsen, & Stenros, 2019). It is through the characters that the larp – the citizen feedback session and the Suomi Cloud narrative, is brought to life. The characters added details and context – the characters’ experiences with Suomi Cloud exemplified or suggested potential socio-political implications. The character design included character details, such as name, occupation, and privacy concerns, and character quotes describing experiences the characters have had with Suomi Cloud. By taking the role of their characters, the participants were forced to examine Suomi Cloud from their perspective and their character’s perspective, functioning as a lens to examine the future. Thus, the characters had two functions in the Suomi Cloud larp. First, adding details and context to the speculative design as a narrative tool for the designer, and second, as an investigative tool for the participants.

Characters can be either thin or complex. A thin character is simply a player acting as if the fictional setting is authentic while acting “as themselves.” A complex character is entirely different from the player in terms of life situation, values, beliefs, personality, and even species – it involves playing how it would be to live a completely different life. One of the primary purposes of using larp as a method in this workshop was to showcase many different perspectives – how socio-technical systems benefit some and disadvantage others. Hence, using thin characters would not necessarily allow for the exact variety of perspectives meant to be showcased, depending on the background of the players.

Character descriptions in larps vary greatly, some being a several pages long document outlining the characters’ personality, relationships, background, and quirks, while others are just a name or a set of questions that the player has to answer to create their character. However, Juhana Petterson, a Finnish novelist and larp designer, outlines three simple principles to keep in mind while designing larp characters; 1. Short is better than long, 2. Human beings can only remember a limited amount of details, 3. Players will customize the character. (Pettersson, 2019) Following these principles, the characters for this larp were not given lengthy background stories. Instead, the characters were designed using various properties that could mediate their relation and experience with Suomi Cloud, such as income level, education level, privacy concerns, digital skills, and nationality. Additionally, as the characters started taking shape, some slight hints about their motivations and everyday life were added to give the participants something to build on while imagining their characters’ lives.

Figure 10 - Character details for Mei Nian Chang, see appendix for all the characters

Suomi Cloud

Personal data

Surname (current):	Chang
First names (current):	Mei Nian
Date of birth:	11.03.2007
Marital status:	Cohabitant
Mother tongue:	Mandarin
Country of birth:	China
Municipality of residence:	
Occupation:	Augmented Reality Designer
Income level:	Medium-high
Education level:	MSc
Digital skills:	8/10
Privacy concern:	Low
Children:	1
Hobbies:	

Notes

- Excited about tech, and keeps buying new gadgets, especially from the startup scene in Shenzhen
- Thinks the Suomi Cloud system is impressive, but is not able to fully make use of it
- Currently on maternity leave, but existed to get back to work

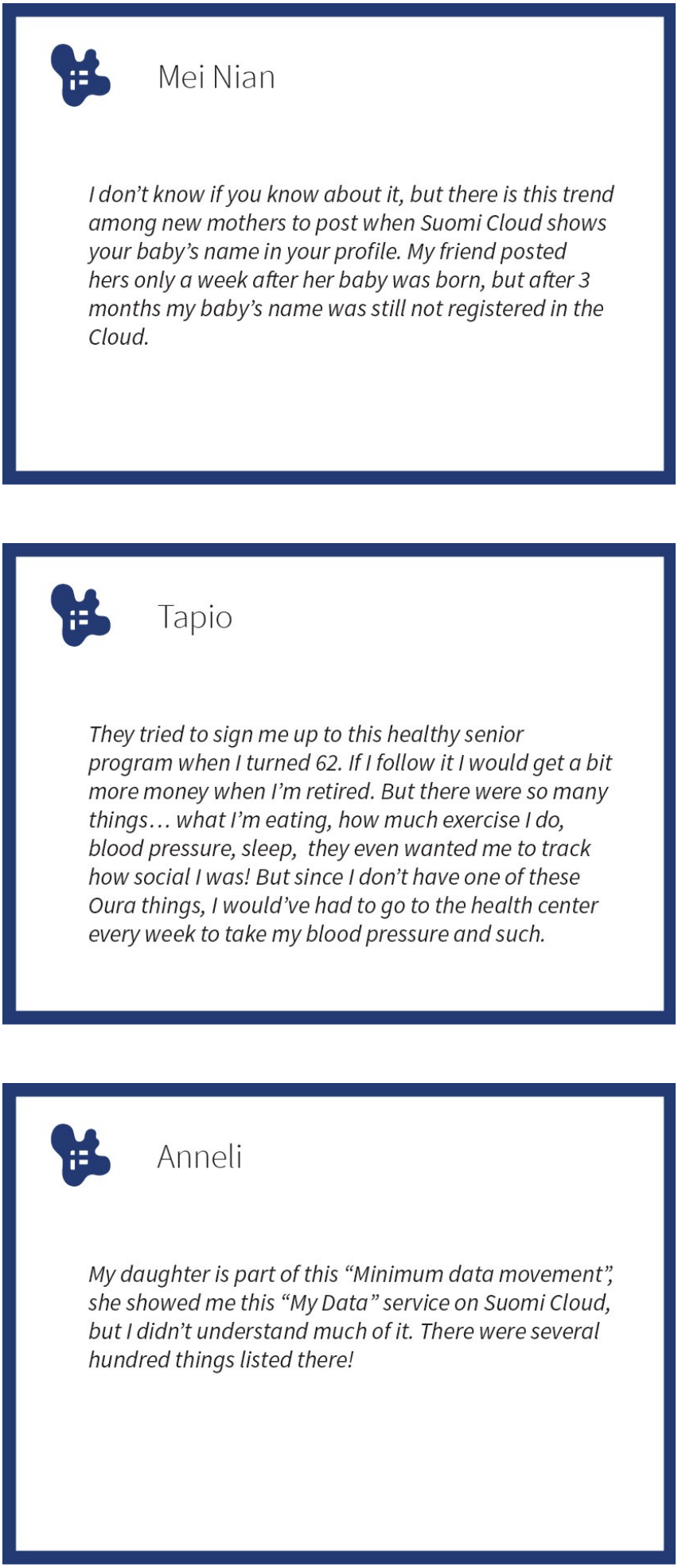


Figure 11-16
Character quotes

Lumi

Normally I would never connect anything to Suomi Cloud, but I made an exception for my health and got the Oura Ring. Can't risk having a heart attack while I'm out running, and just rely on that hopefully somebody is there to save me. The Oura also removes some of the most annoying questions when booking with OireBot, which is neat.

Aarav

I've tried to transfer my family's health records from back home. I thought since they were in English it should be fine, but the system has a hard time registering them, only about 50% got uploaded. So I'm working on programming a system to upload the rest, because I wouldn't really want to do that manually.

Luiz Antônio

I got this health tracker from back home called TudoBem! it lets me sell my health data to the companies and organizations I want to, but Suomi Cloud doesn't support it.

There were in total of 11 characters created, one for each participant in the workshop. However, they were all based on four base-characters that were first created for the test-run. The four base-characters were sufficient because the participants were divided into three groups of 3-4 people during the workshop to allow natural conversations. Therefore, it was unnecessary to create 11 unique characters, as the larp interaction would be limited to groups maximum of four people. Nevertheless, while some characters have almost identical character details, they all had their own name, occupation, and birthdays. The distinction between all characters was made for each participant to feel ownership over their character. Moreover, it would make it more fun for them to chat about the larp afterward as they could compare each other's characters.

The four base-characters were designed to create a varied collection of perspectives. The different perspectives were present in the base-characters primarily regarding class (income level, education level, occupation) and privacy concern. Also, attributes like age, digital skills, nationality, and health were added to the characters. Lumi, the AI ethics consultant, represents the privileged in society with a high level of income, education, and digital skills. At the same time, Olavi, an unemployed young man suffering from mental health issues, tells the story of someone that is marginalized in society.

Playable characters are an essential part of larp and character design. It involves making sure that the characters can "do their thing" in the larp. E.g., if a fighter pilot has no plane, the player might feel superfluous and useless if the character does not have any other motivations to explore during the larp. Petterson insists that playable characters need to pass the basic functionality test of a larp character: to provide access to the content of the larp. (Petterson, 2019)

During the test-run, it is evident that the Olavi character was the least playable character of the four. The content of the larp was to talk about Suomi Cloud experiences. However, Olavi was not a very active user of Suomi Cloud as he lacked both digital skills and access to the technology. The character's passiveness caused the participant playing Olavi difficulties in contributing to the conversation and the larp. Hence, the final Olavi character was updated slightly to appear in a less marginalized situation, for instance, by increasing his social capital and lessening his mental health issues. However, this showcases one of the weaknesses of the "Citizens feedback session" as the setting of the larp, as it excludes marginalized characters like Olavi and those that are even worse off (e.g., illiterate elderly immigrants) access to the larp.

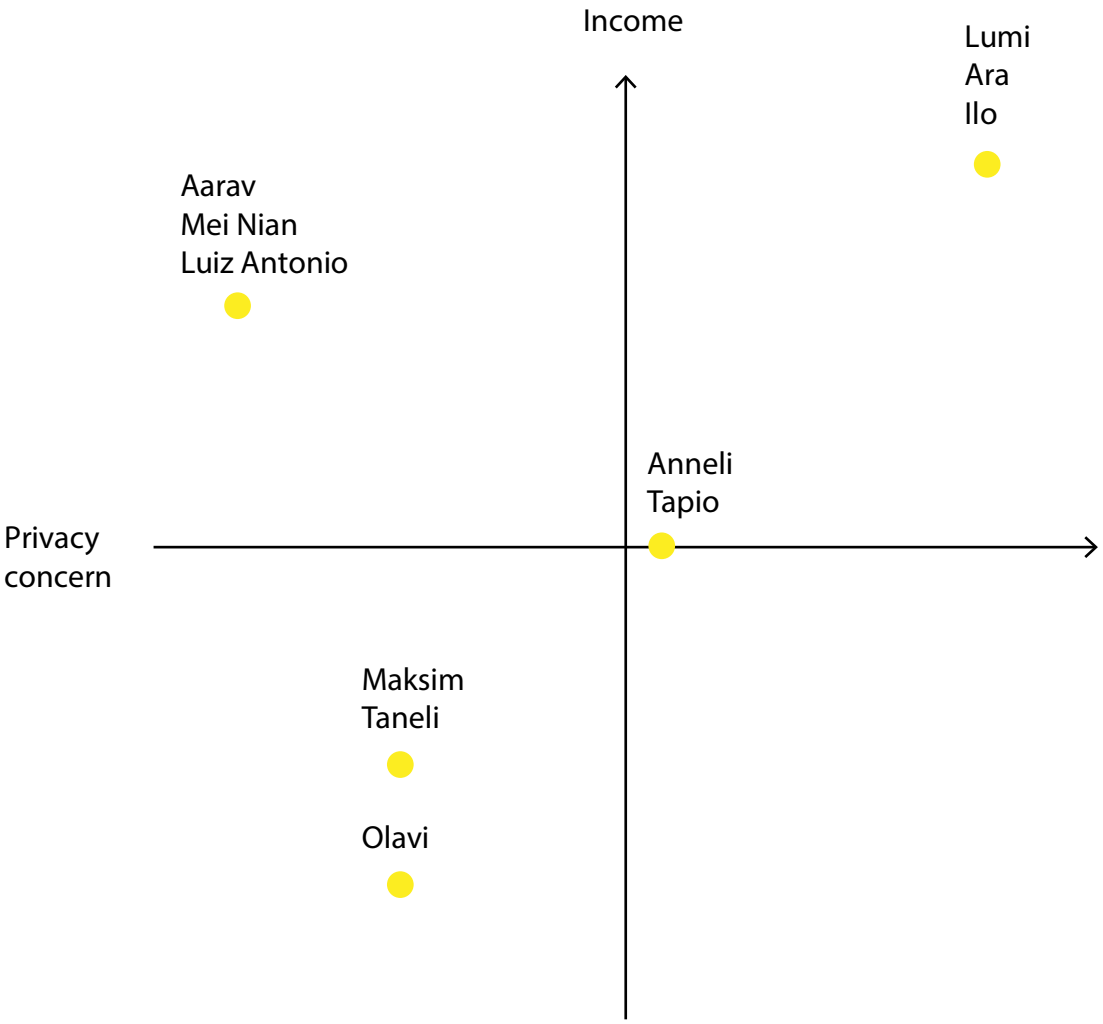


Figure 17 - Matrix showcasing how characters relate to income and privacy concern

4.4 Workshop design

4.4.1 Materials

The graphic design of the workshop materials was designed to visualize and support the difference between the present 2020 workshop and the future 2035 Suomi Cloud larp. The character details, quote cards, Suomi Cloud presentation, and character name tags were all branded with the Suomi Cloud logo and colors, inspired by the present Suomi.fi style guide. The rest of the workshop presentation, task canvases, name tags, workshop invitation, and feedback survey was designed with a completely different look and feel.

Figure 18 - Name tag to be used during the larp
Figure 19 - Name tag to be used for the rest of workshop

4.4.2 Schedule

The workshop schedule included three parts, two of which took place in the present, the first and the last, and one that took place in 2035. The first part, “Getting ready to time travel”, included warm-up games for the participants to practice improvisation techniques, presentation of the Suomi Cloud vision, and tasks for the participants to build on the story of Suomi Cloud and their characters. The latter, namely tasks “Worldbuilding” and “Character

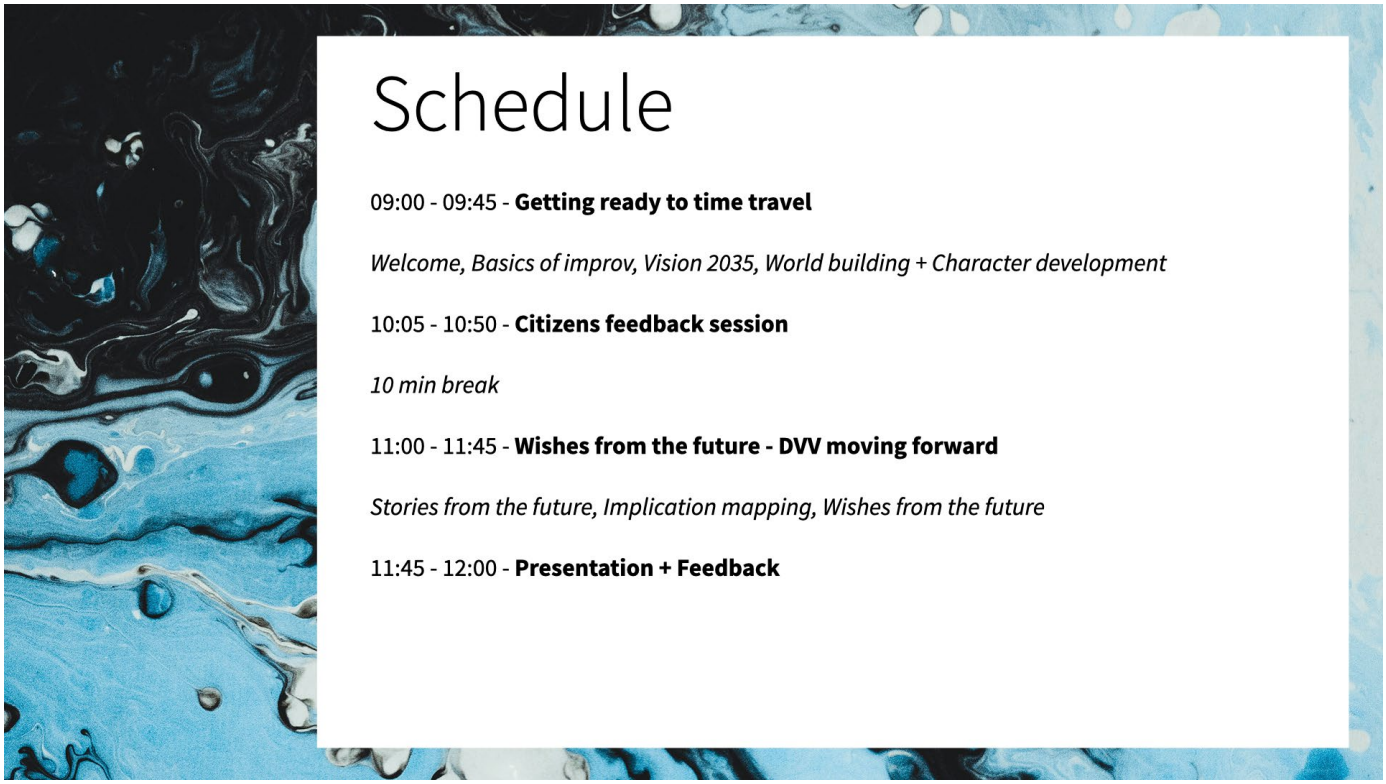


Figure 20 - Workshop schedule

development" were originally not part of the workshop schedule. However, they were added after the test-run revealed that the test-run participants would like more time to prepare their character for the larp.

The second part, "Citizens feedback session", was the larp part of the workshop, taking place in 2035 and lasting for 40 minutes. In the test-run, the participants only larped for about 20 minutes and expressed concern about the idea of it lasting longer as they felt they "ran out" of things to say towards the end. Despite that, it was particularly towards the end of the larp that the test-run participants loosened up, started improvising, and made new connections. At this point, they seemed to have become more comfortable with their character and could take more advantage of the larp itself. Thus, with the added preparation in the first part for character development, 40 minutes appeared to be a suitable length for the larp.
The last part, "Wishes from the future – DVV moving forward", was reserved for reflection and discussion. It included self and group reflection tasks and tasks that would highlight DVV's present responsibility for future socio-political implications.

4.4.3 Tasks

Suomi Cloud Worldbuilding
What else is included in Suomi Cloud? Brainstorm with your group
Pick one topic for the citizen feedback session (e.g. Suomi Career, Suomi Home, Suomi Family, Suomi School)
Develop the service further until you are at the point you can imagine how your character would interact with it

Initially, the plan was to have three pre-set topics for the participants to discuss during the citizen feedback session, e.g., Suomi Health, Suomi Career, and Suomi Family. However, the test-run, which had only focused on Suomi Health, showed that this one topic was rich in aspects to explore. Additionally, as previously mentioned, the test-run participants had requested more room to prepare their own point of view before diving into the larp. Hence, the final workshop design only included Suomi Health as the pre-set topic of discussion while letting the groups choose one additional topic they would like to explore through the worldbuilding task. As the Suomi Cloud vision was not meant to be a complete story, but rather a starting point to extrapolate the future further, the task allowed the participants to fill out the blanks of Suomi Cloud and imagine what more this future could entail.

Character development
What Suomi Cloud services would your character use? What services does your character not have access to? What services does your character like and dislike? Why?
Come up with (at least) 2 more quotes

Character development is a significant part of the larping tradition. Some larps do not even have pre-written characters; instead, they are created by the participants during a pre-larp workshop. In this case, participants were already given details about their characters one week ahead of the larp. They were asked to elaborate further on their characters – what are their hobbies, what is their life like – is it busy or slow, do they have many friends? Therefore, the character development task in the workshop was not aimed at developing character traits nor fleshing out a backstory, but rather to give the participants a chance to reflect on Suomi Cloud through their characters' eyes. In the test-run, the participants suggested allowing participants to write quotes for their characters before the larp. Subsequently, in the final workshop design, the participants were given blank quote cards in addition to the pre-filled ones and tasked to write 1-2 additional quotes for their character.

Self-reflection & Group reflection

After the larp, the participants were given an individual written task to self-reflect on the larp experience. They were asked to describe their character's experiences and their personal opinions about what life was like in 2035. After a 10 minutes break, the participants were asked to share their reflections with their group. Such reflections are a common practice in the larping tradition called debrief. The purpose is to leave space for the players to digest their experiences in the larp and say goodbye to their character and the fictional world. After intensive larps dealing with sensitive topics, debriefs are even more critical for the players to reflect and come to terms with impactful and emotional experiences. Debriefs are also used for players to hear other player's experiences of the larp, as each one of them has experienced the larp from a different perspective. However, a fully open sharing session can result in the participants influencing each other's answers and perception of how the larp went and their experience. (Koljonen & Arbjørn, 2019) Hence explaining the choice of dividing the reflection after the larp into two parts.

Implication mapping

The implication mapping exercise was designed to be somewhat of a summary of the reflection sessions. Mapping out different socio-political implications they had talked about and noticed from their "travel" to 2035 and categorizing them based on desirability.

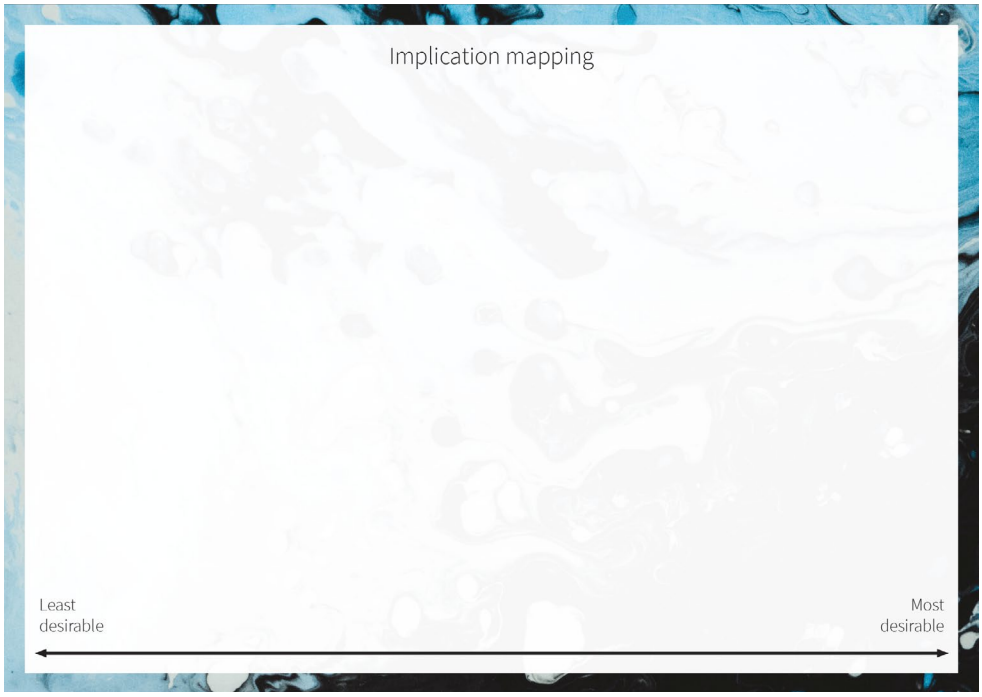


Figure 21 - Implication mapping canvas

DVV Project mapping, Wishes from the future

The last tasks of the workshop were designed for the participants to draw lines between the fictional future of Suomi Cloud and the work they are doing today. The DVV Project mapping task also acted as a test to see if the DVV employees would recognize the projects and activities that had inspired the Suomi Cloud narrative. Wishes from the future asked the participants to select one of the “undesirable implications” they mapped in the previous exercise and match it with a current DVV project/activity, then reflect upon things to keep in mind to strive to mitigate the chosen implication.

Figure 22 - Wishes from the future canvas

4.5 Running the workshop

The workshop was held at the DVV headquarters on the 25th of February 2020. There were 11 participants in the workshop, nine DVV employees, and three students from the Aalto thesis project team. The workshop was facilitated by myself with the help of two assistants, Juuso Karvonen and Hala Menassa.

The workshop ran smoothly with only minor technical hiccups. Towards the end of the workshop, however, the schedule unfortunately trailed slightly behind resulting in the last exercise being cut short, as well as the sharing and discussion part. The participants were engaged and interested throughout the workshop and feedback given both immediately after the workshop as well as in the feedback survey a couple of days after, suggested all participants had enjoyed it and found it useful.

During the larp the participants generated more than 30 new ideas (new services, new technological solutions etc.) for the Suomi Cloud concept. One example is the concept of a MyData will, where citizens have complete autonomy over their own data, and can decide who will inherit their data when they pass away. Additionally, around 60 potential socio-political implications emerged during the discussions – ranging from new laws to personal struggles like not being able to afford what the AI recommends. The topics discussed and the questions raised were analysed and clustered into 5 themes. These will be presented in the next chapter.

5. Analysis and results

This chapter presents the results of the research analysis and the key findings. The first section explains the data collection and analysis method. The second section presents the results of the workshop as five different themes of socio-political implications. Finally, the third section evaluates speculative design and live action roleplay as tools by presenting their benefits and challenges.

5.1 Data collection and analysis

The data material for this thesis has been collected throughout the work of the case study, including notes from the background research, throughout the design and planning process of the workshop, and empirical data from the workshop itself. Three interviews were conducted and transcribed at the beginning of the project as part of the background research. In the workshop, material was generated from participants while completing the written tasks, additionally, the workshop was documented with an audio recorder at each table, written notes from the facilitator and assistants, and photographs. After the workshop participants were asked to fill out an online feedback survey which 10 out of 11 participants completed. Moreover, some participants were asked follow-up questions through email, WhatsApp, or Zoom video call concerning specific details from the workshop.

The data analysis was conducted separately for the two following sections. The data analyzed for section 5.2 includes transcribed audio recordings from the final workshop and documentation of the workshop tasks. The topics discussed and questions raised relating to potential socio-political implications were clustered into 5 themes.

The data analyzed for section 5.3 includes observation from the test-run and final workshop, audio recording, and documentation from the final workshop as well as feedback from the participants. The data has been coded into benefits and challenges and subsequently into five themes.

Figure 23 - One of the groups presenting their implication mapping exercise

5.2 Exploring socio-political implications

Digital divide, not only technical skills

Maxim cannot afford all the things Suomi Food is recommending him. Lumi feels she was forced to buy the Oura ring to get quality health care, and Mei Nian is too busy taking care of her newborn baby to choose anything other than what Suomi Cloud recommends. Ilo only uses private health care to avoid having his data logged and Taneli, the digital angel, says it as it is – *It's a billable service. If you want to fast, then you pay for it, and I take the money, thank you.*

The digital divide is not a simple binary equation of high or low digital skills. It is shaped and mediated through a myriad of different circumstances such as class, race, gender, age, nationality, culture, health, et cetera. How will information be kept available outside the digital realm? Is data privacy only for the rich and privileged enough to have "time for that"? Are the digital self-service solutions enough when ones' problems are complex and multi-layered? Will the benefit of AI-powered services reach marginalized groups of people at all?

Autonomous AI vs Independent citizen

Tapio was shocked to realize that his mother was being kept alive by AI through health technology. Olavi would like to make his own decisions and not only be served recommendations all the time. Ilo is concerned that Suomi Food is just recommending to her what she likes to eat (ice cream) rather than what she should be eating. At the same time, Maxim is concerned about if his hamburger dinner will affect his sickness allowance.

When algorithms steer digital public services, how do we balance the need of society with the needs of the individual? Should career paths be recommended based on personal dreams or societal demands? With digital services fighting each other to make the most personalized service, who defines us in the end? As digital services become easier and easier to use, are we just turning into easily governed citizens? When do personalized, proactive services go from convenience to surveillance?

Maxim: I hope that's not connected to the government database, like for supporting me, so that if I will go and have a hamburger, that's like going down and I will get less support straight away. That okay, that's a strike one.

National borders in the era of the cloud

Luiz would like a Europe-wide human capital transfer powered by the cloud, and Mei Nian is struggling to transfer her health data from China to Suomi Cloud. Likewise, Maxim wished he could include his Estonian parents in Suomi Health to see how they were doing.

Different countries have different privacy procedures, will our data be safe when it starts crossing borders? How does the era of the cloud affect nationalism? When do you decide to be a global citizen, and when do you decide to be a Finnish citizen? As data grows in power and significance, so does the issue of interoperability, also across borders, but how will it affect national security?

Personal privacy vs Privacy of others

Tapio is happy to use Suomi Cloud to check on his mom but skeptical to share too much about himself. While Olavi wants to sell his data to earn some extra cash. Ilo argues with his ex-wife over the data privacy of their son, and Anneli tries to convince her mom to use the Oura Ring. Meanwhile, Ara wants a MyData will to determine the fate of his data postmortem.

Who controls our privacy? Will child data privacy be the next big dispute in couple's therapy? Will children start pushing their parents to collect data so they can inherit it? At what point is public benefit more critical than personal privacy?

The digital addiction, The digital struggle

Maxim sticks to old technology that he knows how to use. Anneli is overwhelmed by hundreds of MyData requests to manage, and Ara is tired of Suomi Cloud always going "beep beep beep" with some "important message". Mei Nian is worried if the data booking her health appointments are up-to-date and reliable. On the other side, Taneli is working all hours of the day to manage his client's digital needs.

The speed of digitalization is just increasing, technology is getting smaller, better, faster, stronger, and "everything" is available anytime, anywhere. However, is the data up-to-date and reliable? Moreover, are the recommendations reliable? Will digitalization foster more digitalization? Will MyData be another administrative hassle? Can we live with the pressure of keeping up with digitalization?

5.3 Speculative design and live action roleplay as tools

5.3.1 Benefits

A concrete way to talk about the future
Several of the participants mentioned being able to talk concretely about the future in the feedback survey as one of the main takeaways from the workshop. The conversations during the larp ranged from existential questions like – *"If the digital services are so easy to use, will citizens be easily governed?"* – to how to recognize which health trackers are compatible with Suomi Cloud (apparently some of them have the Suomi Cloud logo on the package, neat!). The future of the digital public sector involves not only novel technologies but also organizations and businesses managing and distributing these, laws that regulate them, and all the different citizens that have to use or relate to the services. Indeed, discussing this subject can be a complex and abstract. The Suomi Cloud concept allowed the discussion to be grounded in a specific concept, while the roleplay and the different characters added context and use cases.

Fun, engaging and de-weaponizing
Compared to traditional foresight reports, speculative design is often described as a more approachable and engaging way to present and discuss futures and foresight. Typically, traditional foresight reports can be both lengthy and text-heavy, which for many can be relatively dry on un-engaging. (Candy, 2010; p. 3; Darby et al., (2015))
On the contrary, discussing the future scenarios through speculative design, the participants can explore different fictional settings and their implications without tenuous reading. Hence, while the core topic of the workshop was a serious and complicated matter and the tasks, discussions, and reflections rather demanding in nature, the atmosphere in the workshop was full of both engagement and laughter.

Most of the character quotes that I wrote for the larp indicate potential negative socio-political implications of DVV's work, essentially critiquing of their work. When asking the participants to use these quotes as a starting point for further building their character's experiences and opinions, it was technically an invitation to critique their own work. The premise of having a game of make believe, while emphasizing having fun as one of the goals of the workshop, helped to de-weaponize this delicate situation. Thus, the larp was an effective method for engaging the participants in the topic and distracting from a potential negative atmosphere resulting from the critical aspects of the workshop.

I liked this a lot, it enabled concrete and detailed discussion on future from a multitude of perspectives. Usually talking about future may stay on a too abstract level of not be efficient.

(Workshop participant, from feedback survey)

I was by impressed how much to discuss we found on the issue. The discussion turned out to be very many-sided and multi-angled.
(Workshop participant, from self-reflection task)

Collaborative imagination and multi-faceted discussions

As the quote above illustrates, several participants expressed being surprised at how well improvisation and roleplaying worked to boost imagination and come up with topics to discuss. During the start of the larp, the conversation dynamic in some groups functioned as a "multi-monolog". In particular, the participants solely stated their characters' opinions instead of responding to each other and conversing together. However, after warming up with a few opening statements from the different characters, the participants embraced the spirit of "yes, and." They started responding to each other's statements while building the narrative further. As the larp requires the participants to embrace the fictional narrative and make statements on the go, it allowed for spontaneous reactions less clouded by rationalizations while imagining the possible future. The different characters allowed the discussions to become multi-faceted as they brought different perspectives into the conversations.

Tapio: (to Taneli who working as freelance "Digital Angel") But do we both use Suomi Cloud for finding jobs or gigs to do, like, I'm a physical therapist I use Suomi Cloud to find gigs or care homes where I can go to and do the therapy, and I think it has been very helpful and easy...

Lumi: Um, are you finding directly individuals or just organizations...? Because in theory you could access people's data who had like muscles or...

Tapio: Do I have access to people's data?!

Lumi: Do you? I don't know!

Tapio: I don't know either

Lumi:You could...

Tapio: I could have...right

Lumi: Like for example I go running, so you could see that I have some health issues and maybe...

Taneli: Right, and you could send ads

Tapio: I can send ads?!

Taneli: Yeah, personalized

Lumi: Yeah, but as an AI ethics consultant, I would be very like anxious about this

However, the example above also shows that the participants occasionally struggled with being "brave" enough while larping. For instance, they were asking questions rather than making statements, leaving new features or ideas undefined. The struggles linked to the participants' courage will be described further in the next section about challenges.

Fostering empathy

Gaining empathy for the characters in roleplay is one of the main features promoted as a benefit of the method. In the feedback survey, several mentioned that they enjoyed *"trying to think like their characters."* Another participant noted that *"...it was great to see how being in the role of another person you could really see things through that person's eyes."* (from the feedback survey) One of the reasons why larp was chosen as a method for the project was to include diverse perspectives, especially perspectives that might not have been present otherwise. For example, all the DVV employees that participated in the workshop were native Finns. The non-native characters allowed for reflections that might not have taken place otherwise.

One group discussed a "Suomi Food" service that suggested meals and grocery lists to the users. The character Mei Nian mentioned that she wished the service would take into account her Chinese background and not only suggest "meatballs and potatoes." The participant playing this character was native Finnish and would not necessarily have reflected on this aspect had it not been for her character.

The larp also enabled a realization of not knowing enough about particular issues from the characters' point of view. During the group reflection session following the larp, one of the participants expressed concern over how values and trust would affect the interactions with a system like Suomi Cloud and that they did not know enough about that from a non-Finnish standpoint.

I wonder if immigrants have such high trust in the government as we Finns do? Chinese people may not do that, or Estonians, at least older ones that have been born in the Soviet era they might be more suspicious - or not! I don't know enough about the issue, but I think it is something that has to be discussed.
(Workshop participant, transcribed from group-reflection)

Broader perspective and a longer timespan

In the feedback survey, the participants were asked to rate how relevant they found the workshop for their daily job. The participants gave points on a scale from 1 (Not at all) to 5 (Very much). The average rating came back as 4.2, with all of the employees from DVV giving a rating of 4 or above. The participants also rated how useful they found the roleplay for a selection of different goals. The goals included “Understanding DVV’s work in a longer time perspective» and “Understanding DVV’s work in a larger societal context.” Both of the previously mentioned goals gained an average of 3.8, with 80% of respondents giving a rating of 4 or higher. Additionally, the participants were asked if they found the Suomi Cloud concept to be a plausible future which also got a rating of 3.8. Several participants commented that they appreciated how customized the workshop, the Suomi Cloud concept, and roleplay was for DVV and their daily work. Even while coming from many different backgrounds and projects within DVV, they all seem to agree that the workshop had been relevant and valuable. As mentioned in chapter 4.2.2, DVV does not have a official future vision of the Finnish digital public sector that they are working towards, but rather a multitude of various projects and initiatives that put together seem to point in a similar direction. The Suomi Cloud concept combined many of these initiatives creating a possible future that the participants could use to reflect on how their current work could impact the future and whether or not that future is desirable.

5.3.2 Challenges

Fragile way to tell a story

As opposed to speculative designs presented as one coherent text or video, the background story of a larp is presented in many different layers, making it a somewhat fragile storytelling method for a designer. The basic Suomi Cloud story that I had designed was told through the presentation of the Suomi Cloud concept, the character sheets, and the character quotes. However, a larp is a collaborative narrative that only comes to life when the participants play their characters. Thus, larp being the result of a collaborative effort means that during the larp, participants can forget, misinterpret, actively change, or choose not to include parts of the narrative that the designer gives. During this larp, there were indeed some quotes and details that wer not used or forgotten. While it was generally a minor issue, it did result in some perspectives not being included, which could have changed some of the participants’ perception of the Suomi Cloud concept and its socio-political implications.

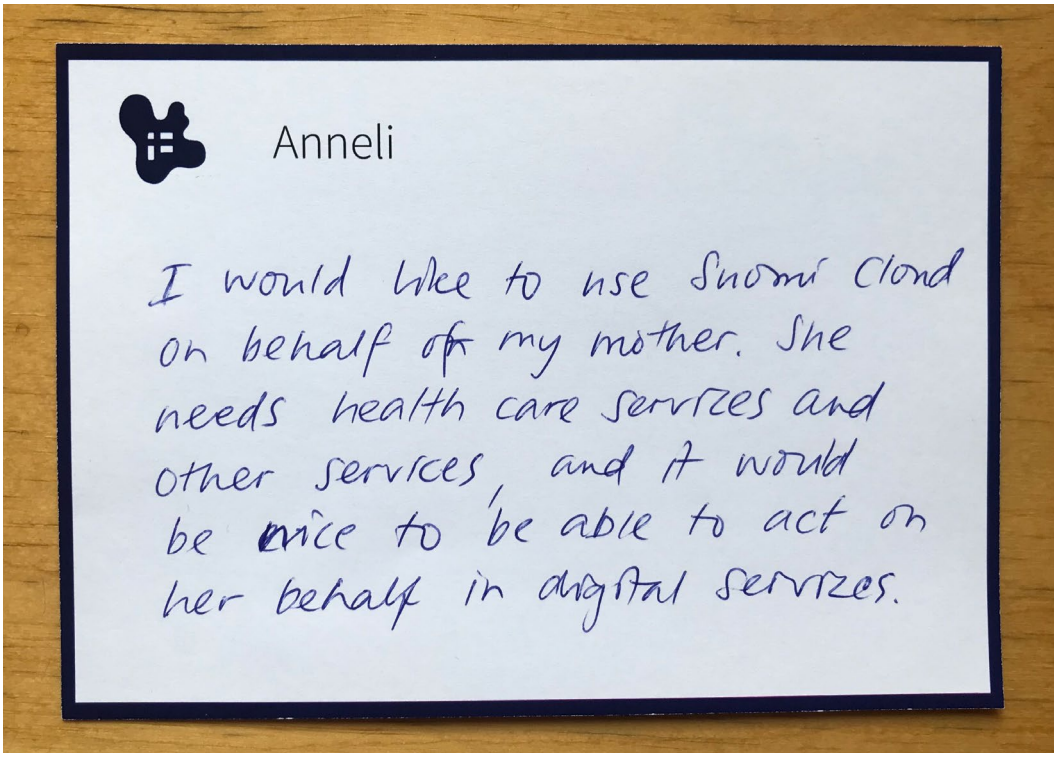


Figure 24 - Filled out quote card for the character Anneli

Larping takes courage and practice

The premise for a larp to come to life is that everyone participating act as if the fictional narrative is true. In this workshop, creating a life-like experience required the participants to act as if the Suomi Cloud concept, including all its services and features, already exists. Still, some participants would phrase their characters' quotes in a way suggesting that the services they needed did not exist yet, such as *"I wish there were a service..."* or *"I would like to...."*

Additionally, as previously mentioned, the participants would also occasionally struggle with being brave enough to define new ideas that they encountered. Rather than making statements, they would leave new features as undefined questions "hanging in the air." For example, one of the groups discussed a Suomi Career feature and what kind of jobs it would recommend to the users. One participant asked another if the system was recommending him jobs that he would like or jobs that the society needed. Instead of taking responsibility for the narrative by replying with an experience with the feature, the participant simply responded that he did not know. However, this insecurity became less of an issue towards the end of the larp, as the participants got more comfortable with improvising.

Ara: (to Olavi) Now that you are looking for a job at some point, would you, are you looking for any kind of job, you may have your dreams and your goals, but then again society will have theirs. So, if you want to be a YouTube professional or a wealthy influencer, but there's already a million, one million two hundred thousand YouTube influencers in Finland, nobody wants them anymore, but we are running out of plumbers. And the machine goes like, yeah, well in your part of Finland there

is not enough plumbers, how would you like to train to become a plumber?

Olavi - I don't know

Ara - But it pays well

Olavi - Probably it pays well, but money isn't that important to me. I'm more interested in how sort of like having a, trying to sort of express myself in some way.

Furthermore, these moments where the participants would question whether or not a feature existed or functioned in a particular manner and left them undefined affected the "Implication mapping" task after the larp. By leaving concepts undefined also caused implications to be undefined. One of the workshop participants remarked: *"In terms of implications, I had more questions rather than statements on implications."* However, this did significantly impact the purpose of the workshop, as the purpose was to engage the participants in reflection and asking questions.

Including marginalized perspectives needs more facilitation

While several of the participants felt that the roleplay successfully allowed them to see the world *"through their characters' eyes,"* the actual degree of empathy the larp was able to elicit for the participants was relatively fragile. This particular larp did not involve "acting out" any interactions with systems or services. Instead, it was up to each participant to define and imagine how their character experienced life in 2035. The character details and quotes were kept concise not to overwhelm the participants with information. Consequently, the amount of knowledge a participant held about the life situation of their character, either as previous knowledge or through research preparing for the workshop, determined their experience and contribution to the larp, and how much empathy they and the other participants would experience.

Issues that marginalized groups of people experience are, by definition, not issues that the general population would have much knowledge about or even recognize. Thus, when the issues of marginalized groups are not explicitly expressed, they may fall entirely under the radar. Gender-based issues were not included in the design of the larp. However, one group of characters were given gender-neutral names as an open invitation if the participants would want to bring up such issues. The participant playing the character Ara notice the gender-neutral name of his character and presented his character with an "unspecified gender."

Ara: My name is Ara Lehtinen, my gender is unspecific, and I'm an algorithm bias auditor

However, the participant did mention nor utilize the gender of his character any further during the larp. When asked about this in a follow-up email after the workshop, the participant explained that he had thought that it was “cool” that the name was gender neutral. Nevertheless, his interpretation of the gender (or the lack thereof) played no part in how he viewed the character. He stated that he identifies as cis-male and heterosexual, but also mentioned having taken a gender identity test ten years ago that came out as “psychologically androgynous”.

The lack of voicing a narrative of a gender-nonconforming person’s perspective suggests that a cis-gendered person needs an extensive understanding of what it is like to be a gender-nonconforming person to larp this kind of character. Accordingly, the participant portraying Ara’s character has lived experience as a cis-gender male with a relaxed relationship to gender, translating how he perceived Ara’s experience as a gender-nonconforming person. As a result, during the larp, the participant did not consider that the character’s gender identity would shape their experience of Suomi Cloud in any significant manner. However, as argued in chapter 2.2, when a digital system is based on a binary gender model, it dramatically affects the user experience of Queer, Trans, Intersex, and Gender Non-Conforming (QTI/GNC) people.

Similarly, two characters were unemployed or on partial sick leave, which I had imagined would perhaps prompt the participants to reflect on the bureaucracy of applying for and maintaining social benefits. Yet, I had not included quotes pertaining to such particular experiences, and consequently, these topics were not explored during the larp.

Exploring technical solutions or socio-political implications?
In the question about how useful the larp had been for various aims, “Further exploring the concept of Suomi Cloud” and “Imagining future technical solutions” were rated the highest with respectively 4.3 and 4.1 as their average score. On the other hand, “Imagining socio-political implications of future technical solutions” got the second-lowest score of all the alternatives with an average of 3.7. Nevertheless, the transcription and analysis of what was discussed during the roleplay suggest a different story. There were many notions and stories about potential socio-political implications that were described and discussed during the larp. However, many of them were not brought up again during the reflection sessions. Instead, there was a clear tendency to focus on technological aspects of Suomi Cloud rather than social, cultural, or political aspects around Suomi Cloud.

The problem in DVV is that we know lots of stuff, and we are aware of class issues etc, but I think that the language we speak is so technological, and the focus is very much on technological perspective, so we forget that which is a very bad thing.

(Workshop participant, follow-up comment after workshop)

For example, one of the groups discussed having an incomplete dataset in one's health profile. During the larp, this issue was explored through the characters Maxim and Mei Nian that both had issues with transferring health data from their home country to Suomi Cloud. The group continued discussing the subject further during the reflection session. However, their discussion focused mainly on the technical issue of an incomplete dataset causing the health AI to make wrong conclusions.

If it's related to health care, how can you analyze anything if you only got part of that person's life, and it shows high blood pressure or something else high, but you have had that since you were like 6 years old, but you don't have the data at all, you just have the last two months or something, and you have the ambulance coming already to pick you up.
(Workshop participant, transcribed from group-reflection)

Reflecting on the same issue through a socio-political lens, we could find implications such as a lower quality healthcare for non-native Finns and those that cannot afford health trackers. Moreover, wrong conclusions from the health AI could lead to potential extra costs for the healthcare sector.

It appears that it was challenging for the participants to focus on socio-political aspects and to recognize implications by extrapolating the personal stories and experiences of their characters to larger societal structures. Despite designing class issues as a central theme in the larp, the topic did not surface to any substantial extent during the workshop. In a conversation after the workshop with two participants about this issue, it was noted that the language and focus in DVV are particularly technological. Thus, the issue is not necessarily whether or not speculative design and larp are suited for exploring socio-political implications – they clearly can be, but rather how to encourage and facilitate a shift of perspective from technical to systemic and socio-political.

One man's dystopia is another man's utopia

As argued in chapter 4.3, I aimed to create a future narrative that was neither utopian nor dystopian. However, the primary goal has been to ask critical questions about the future of the digital public sector to explore and uncover potential unintended consequences and negative socio-political implications. Wu et al. emphasize the need to balance the critique when working with a company whose practices are the target of critique. *"If the critique is too strong, people might feel offended or uncomfortable, which would cause problems and frustration in interactions and collaboration."* (Wu et al., 2019)

During the test-run of the larp, the participants perceived the Suomi Cloud concept quite negatively, mentioning “We go straight to black mirror” and “dictatorship” as some of their comments in the reflection session. In the final workshop with DVV, the reflections were less harsh. While there were discussions of negative implications in all three groups, the general tone of the conversation was less negative and more neutral.

There could be several reasons for the difference, including a slight difference in the design of the larp. The test-run took only half of the time of the final workshop, and the participants relied more heavily on the pre-written quotes. In the final workshop, the participants had more freedom to affect the story by writing their own quotes. Additionally, two of the pre-written quotes were not used in the final workshop, both meant to illustrate negative implications.

However, I believe the main reason for the difference in critical reflections between the two larps is the participants themselves and their own knowledge about and attitude towards public sector digitalization. At least two of the participants in the test-run had clear reservations about the digitalization of society in general and about the Suomi Cloud concept specifically, especially regarding privacy issues. One of the participants does not even use a smartphone in his daily life. Conversely, as the final workshop participants were employees of DVV, their daily work involves promoting the digitalization of the Finnish public sector. Therefore, their attitude towards the topic and the Suomi Cloud concept could be biased and expected to be positive or neutral.

The same concept could evoke such different reactions and imagined implications, showing that the level of critique in the design needs to be adapted to its audience. However, contrary to my assumption and the conclusion of Wu et al., it appears that a more explicit critique could be necessary in order to engage public sector employees in discussions about possible negative socio-political implications of their work.

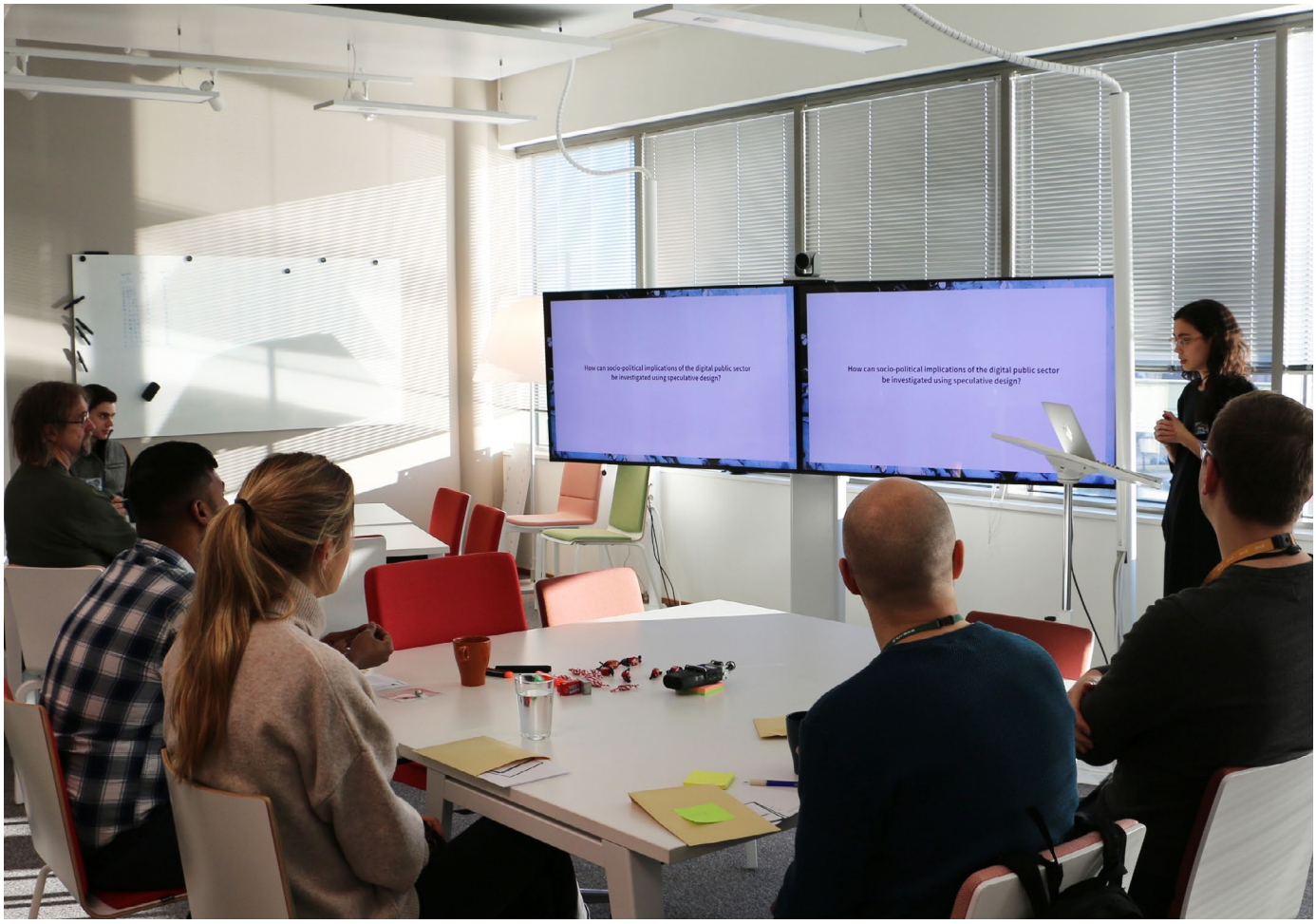


Figure 25 - Workshop introduction

Figure 26 - Improvisation games

6. Discussion

This thesis explored the use of speculative design and live action roleplay as tools for investigating potential socio-political implications of the future of Finnish digital public sector. The following chapter discusses how the findings answer the research questions and outline some recommendations for overcoming some of the challenges identified in chapter 5. Finally, some areas for further exploration are presented.

6.1 Reflection on findings

How might speculative design and larp be used to prompt speculation of potential socio-political implications?

The Suomi Cloud speculative design worked as a powerful tool to elicit concrete discussions about the future. The live action roleplay contributed to making the content engaging and fun while adding context, personal stories, and exemplifying societal implications. The different characters also helped to highlight tensions between different needs and opportunities between different groups of citizens, exposing how the powers of structural inequalities are embedded in digital systems and creating multi-faceted discussions among the participants. Moreover, the characters contributed to diversity in perspectives that might not have been present otherwise and created empathy for their experiences.

However, the workshop participants evaluated the effectiveness of the larp to explore socio-political implications to be mediocre. At the same time, their statements in the roleplay suggested a myriad of significant implications. For example, the raise of a surveillance state to determine benefit payments, lower quality public services for those that cannot afford the newest technologies, and a diminishing democracy in face of the rise of decision-making algorithms. Nevertheless, few of these topics seem to find their way into the discussions and reflections after the larp. As mentioned in the previous chapter, the participants focused more on technical issues than social-political issues.

The reflections on the workshop suggest that relatively simple mechanisms and tools could help combat this challenge and shift the participants' focus over to societal and political structures. For instance, including more specified prompts in the post-larp reflection tasks such as "How did social class/income level affect access to data privacy?" or "How did ethnicity/nationality affect the experience and the quality of the public services one could access?".

Additionally, the facilitator could be more active during the actual larp to help steer the discussions. During the "Suomi Cloud citizens feedback session," together with my assistants, we were only acting silently as "Suomi cloud representatives." Our role was merely sitting at each groups' table, observing the discussion and taking notes. There were several moments I would have liked to jump into the conversation and ask questions to have the participants further explore a specific topic. However, in order to compare the results from all three groups equally, their experience needed to be equal. Given that my assistants were not very familiar with my research, I did not find it appropriate to have them actively join the discussion and asking questions. Therefore, there was no facilitation during the larp in this instance. However, assigning a more active role for the assistants could be a valuable tactic for future sessions.

In order to explore socio-political implications successfully, the experiences of marginalized people need to be included. However, including marginalized perspectives proved to be more challenging than initially imagined. As explained in chapter 4.3.3, heavily marginalized characters were not especially "playable" in the context of the Citizen's feedback session. Consequently, I could not include, for example, a paperless asylum seeker or an older person oblivious to the digital world as characters. Some marginalized perspectives were still included, such as in the case of Olavi, a character that is both unemployed and struggles with mental health issues. However, the information each participant received about their character was relatively concise. The intention was to prompt the participants themselves to imagine the experiences of their characters. Therefore, I was careful with how much of the character's experiences I designed into the character's quotes. In hindsight, it is clear that the participants could have been prompted with more information. Notably, as described in the previous chapter, marginalized issues need to be explicitly presented to be recognized as issues.

Furthermore, the participants could have received more information before the larp. The participants were only given the "Personal data" character sheets to prepare for the larp. Information about the Suomi Cloud concept and the character quotes were given in the workshop. There was a lot of information and details to take in and remember in a short amount of time, leaving limited capacity left

for participants to imagine experiences beyond those first thoughts that pop into their heads. By giving the participants a bit more time to digest the Suomi Cloud concept and a little more insight into the experiences of the marginalized might have stimulated them to explore those topics further during the larp.

Another possible solution is to change the context of the larp from a “Citizens feedback session” to one where the players act out their interaction with the Suomi Cloud services. For example, interactions with an AI chatbot could be easily simulated with someone acting as the AI through SMS or some other chat service. Initially, there had been ambitions for designing the larp in such a manner. However, it proved to be rather challenging to organize while being the sole facilitator. Having the participants
play the roles of Suomi Cloud representatives was also considered, but in the end, this approach was not chosen. Having these characters in the workshop would have put too much responsibility and pressure on only a few participants to imagine and act out the Suomi Cloud concept. Still, designing a larp with more “physical” acting is not necessarily an arduous task when there is more than one facilitator.

Lastly, perhaps the most natural solution, to include marginalized groups of people as part of the participants in the larp. Including more participants from outside DVV and having a more heterogeneous group would likely have helped to diversify the discussions and reflections. As described in the previous chapter, the participants in the test-run perceived and reacted to the Suomi Cloud concept quite differently from the participants in the final workshop. Nonetheless, one concern would be how to distribute the different characters in the roleplay. Should an unemployed participant play an unemployed character? What if a young DVV employee would be playing an elderly retiree character whose life is quite different from their own, while the unemployed participant would be playing a sort of 2035 version of themselves? How would this affect the power balance in the larp?

How might the exploration of socio-political implications contribute to a more equitable digital development in the public sector?

Initially, the objective of this thesis was to utilize speculative design within an ongoing project, to create reflections that would feedback on the development goals of said project. In the end, the Suomi Cloud vision incorporated many different projects and activities that DVV is involved in, and the topics discussed and reflections made spans over a breadth of these. Thus, the workshop’s outcome could not be put into neat boxes of “things to consider” for the next

strategic project meeting. Instead, the workshop increased general awareness that the future, and its implications, are shaped by our present actions.

Furthermore, this research has shown that many different factors determine one persons' access to digital public services and the quality of the service experience. While DVV strives to make digital public services accessible through universal design principles and digital support initiatives, their focus is primarily on technical matters. Yet, class, gender, and ethnicity are all examples of factors that can mediate a digital service experience. In the case of public services, these factors will also mediate the citizen experience and how one feels treated as a member of society. The project was an attempt to enable DVV to evaluate their work through the lenses of these factors to reveal blind spots of implications they had not previously considered. More importantly, however, the research identified a lack of attention in DVV to issues such as class to be matters of concern when developing digital systems.

In their strategy statement for 2016-2020 (as the Population Register Center) they claim to "work in an ethical manner - for the best of our customers and Finnish society". However, most of their work routines does not actively involve any ethical guidelines. The only exception being official and general legislations that every organization has to follow regarding the ethical use of data and their work with the Aurora AI network. Moreover, discussions with some of the participants after the workshop revealed both a lack of awareness and a language to express issues regarding societal inequalities within the organization. With an ambition to become "the best digital agency in the world" and work for "the best of Finnish society", DVV is required to take these matters into concern. Hence, indicating a need for in-house knowledge building and training of such topics going forward. In that sense, the workshop worked perhaps more as a diagnostic tool, to identify gaps in their understanding, rather than directly addressing those gaps.

The future and its' socio-political implications are constantly emerging. Therefore, examining, accounting, and caring for the future should be a continuous activity. While speculative design is starting to step out of the white cube and enter the "real world" through organizations both in the private and public sector, most of these efforts are still made on a project basis. Design fiction researcher, Søren Rosenbak, calls for more long-term engagement with the future. Rosenbak argues that "in-depth understanding of an organization enriches design fiction" makes it easier to imagine "a myriad possible futures" to question where the organization could or should be headed continuously. (Sinclair, 2019) In other words, the deployment of speculative design should be like a lifestyle change rather than a 5-day diet.

6.2 Further exploration

After the workshop, DVV expressed interest and engagement in further pursuing the work of exploring the future and its socio-political implications. They asked for guidance on how to continue utilizing speculative design. An increasing number of tools and toolkits have been released to make it easier to get started with speculative design. However, in-depth knowledge and research about how and when to use these tools within an organization remain scarce. Hence, further research should involve diving deeper into how to facilitate this lifestyle change in an organization like DVV. The specific considerations involve questions like what tools to use, what projects to target, which people to involve, and when to do it. Also, a practical framework and research-based recommendations to utilize speculative design as a regular exercise rather than an excursion could benefit organizations in both private and public sector.

As a method, larp can be a relatively resource-intensive. In contrast to speculative designs presented, for instance, as a newspaper headline, the creation of a larp requires many levels of design. In this instance, the larp design included the design of a backstory (the Suomi Cloud concept), the design of the larp setting (the citizen's feedback session), the design of different playable characters, and the design of how to convey these characters to the participants (character details and quotes). To replicate the same amount of work regularly within a public sector organization would unlikely be feasible. However, just like the creation of speculative design objects has been condensed into games such as "The thing from the future," (Situation Lab, 2014) there exist many pre-written games of larp that can be played multiple times with different constellations and outcomes (Chamber Games, 2008). Perhaps a suitable topic for further exploration would be to design some "plug and play" game of larp used in the public sector with different projects to evaluate possible socio-political implications.

Furthermore, this thesis aimed to explore the socio-political implications of the future of the digital public sector. However, the implications explored in the research have mainly focused on citizens as end-users of digital public services. As a result, a more systemic approach, including implications for groups relating to the digital public sector systems in other ways, could benefit the current development. For example, including the perspectives of the minimum paid workers that are training the AI systems behind these digital systems.

Additionally, larps are ideal tools for exploring entire systems at once. As this research has demonstrated, the coming digitalization process of the public sector will involve many different organizations

and parties. In Suomi Cloud, all the public sector organizations and private enterprises were connected and collaborating to provide seamless services to the citizens. This notion could be an excellent backstory for a larger larp with participants from different organizations, exploring both opportunities and potential conflicts of interests, cultures, and processes. It would also be an opportunity to see if larp can function as an empathizing tool in extensive, complex systems, similar to the research that Sustar and Mattelmäki (2017) present in their article “Whole in One: Designing for Empathy in Complex Systems” (Sustar & Mattelmäki, 2017).

Lastly, this research has shown that larp can function as a method for prompting speculation of socio-political implications. Nevertheless, this case study only involved one test-run and one final workshop. With such a small sample size, more larps should be organized, and more research would be needed to understand the method’s full potential. For example, it would be interesting to see how the method would perform with different combinations of participants.

7. Conclusion

A proactive digital public sector might make life easier, but where do we draw the line between "personalized services" and "surveillance state"? How do we balance questions of efficiency and convenience with accountability and democracy? Will marginalized groups of people benefit from AI powered services at all?

The digital governance systems of the future will have consequences far more complex than what traditional design practices can help prepare us for. We need other tools to examine which societal implications we should steer clear of and those we want to steer towards.

This thesis investigated how speculative design and live action roleplay could be used as tools to explore socio-political implications in the digital public sector. The research demonstrated that speculative design and larp are effective tools for engaging concrete discussions about the future. Larp and improvisation allowed for immersion in the fictional narrative and spontaneous reactions less clouded by rationalization. Different characters created multi-angled discussions and evoked empathy for the characters' experiences. However, a need for facilitation and explicit articulation of issues to discuss was identified to elicit more profound reflections on societal and political implications and structures.

Furthermore, this thesis attempted to address some of the critiques that speculative design has received. First, by taking the practice out of the white and sterile gallery setting and inside a real and messy public sector organization. Second, by utilizing larp as a medium to shift the focus away from the speculative design per se towards the emotional, social, and political implications. Lastly, by including multiple perspectives, also underprivileged ones, as part of the design and debate.

Tonkinwise asked for designers to "take responsibility for designing a debate, running a debate and following through on the decisions that emerge from the debate." I believe the larp was successful in "designing the debate." Likewise, the workshop was successful at

“running the debate.” However, decisions did not emerge from the debate, and hence there were no decisions to follow through. It is precisely here, in the lack of decision-making and continuity, that there is more work to be done. For speculative design to create an impact beyond “opening a debate,” it is essential to develop processes and modes of working to move from speculation to action. Socio-political implications should not only be imagined but also accounted for and mitigated.

This research is based on only one case study but demonstrates a synergy between speculative design as an approach and larp as a medium, which I hope to see more examples of in the future. Moreover, the research contributes to a growing collection of work that has found speculative design a suitable and useful tool in the public sector context. Most importantly, I hope this work can inspire fellow designers to consider implications beyond the “seamless user experience” and include perspectives that are too often left out.

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Appendix

Workshop invitation - 1 page

Character sheets - 11 pages

Feedback survey - 9 pages

To see all the character quotes, the presentation used in the workshop and some of the filled out tasks (implication mapping and wishes from the future) visit: https://drive.google.com/open?id=1xCbVez0o76dCXqgU4xjnxh-Im8Umx72F

25.02.2020
9:00-12:00

Facilitator:
Ming Unn Andersen is a strategic designer currently working on her Masters thesis in Collaborative and Industrial design in partnership with DVV through the Aalto Thesis Project. Her thesis researches the use of speculative design to investigate socio-political implications in the digital public sector.

questions?
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Welcome to 2035

DVV has been working towards a smoothly functioning Finland for 15 years. What does life in digitalized Finland look like? Is it equally smooth for everyone?

You are hereby invited to immerse yourself in the future lives of Finnish citizens and residents. During the workshop we will explore how the work of DVV has affected the digital public service experience in 2035.

Interoperability platform, architecture bank, suomi.fi, Aurora AI, Data Exchange layer, design system - what will be the combined societal implications of all these efforts? Digitalization of society effects us all, but all of us in different ways. How will it affect basic values like human rights, freedom and democracy? Preparing for the future means having an understanding of what might come.

The aim of the workshop is not to provide answers, but ask questions. We will experience speculative design* scenarios of future digital lives of different people and engage in discussions to surface potential socio-political implications of DVV's work. What implications do we want to contribute to, and which should we try to avoid?

***Speculative design** is a design practice addressing big societal problems and looking towards the future—and creating visions of possible scenarios. Speculative design asks us to zoom out beyond user-centered design and ask what the effects of our designs could be on future societies.

Speculative design has long lived only inside galleries and academic circles, but has started to gain traction "outside in the real world", such as in the **UK Policy Lab** and Nesta called it **"a new tool for government innovation"**

Suomi Cloud

Personal data

Surname (current):	Takala
First names (current):	Lumi
Date of birth:	20.11.1993
Marital status:	Unmarried
Mother tongue:	Finnish
Country of birth:	Finland
Municipality of residence:	Helsinki
Occupation:	AI Ethics Consultant
Income level:	High
Education level:	PhD
Digital skills:	10/10
Privacy concern:	High
Children:	1
Hobbies:	

Notes

- Very careful with data sharing, also on Suomi Cloud
- Interested in health and sustainability
- Into the “digital fasting” trend

Suomi Cloud

Personal data

Surname (current):	Jokinen
First names (current):	Ilo
Date of birth:	04.05.1997
Marital status:	Divorced
Mother tongue:	Finnish
Country of birth:	Finland
Municipality of residence:	Helsinki
Occupation:	Personal Privacy Counselor
Income level:	High
Education level:	PhD
Digital skills:	10/10
Privacy concern:	High
Children:	1
Hobbies:	

Notes

- Very careful with data sharing, also on Suomi Cloud
- Part of the “Minimum data movement”
- Interested in “retro” hobbies such as baking sourdough bread

Suomi Cloud

Personal data

Surname (current):	Lehtinen
First names (current):	Ara
Date of birth:	07.01.1982
Marital status:	Married
Mother tongue:	Finnish
Country of birth:	Finland
Municipality of residence:	
Occupation:	Algorithm Bias Auditor
Income level:	High
Education level:	PhD
Digital skills:	10/10
Privacy concern:	High
Children:	2
Hobbies:	

Notes

- Relatively strict about sharing data, but makes exceptions for energy usage and health
- Suffers from a mild heart condition
- Enjoys debating with the kids over the dinner table

Suomi Cloud

Personal data

Surname (current):	Kumar
First names (current):	Aarav
Date of birth:	26.07.2001
Marital status:	Married
Mother tongue:	
Country of birth:	India
Municipality of residence:	Helsinki
Occupation:	Machine Learning Engineer
Income level:	Medium-high
Education level:	MSc
Digital skills:	10/10
Privacy concern:	Low
Children:	Expected 03.05.2035
Hobbies:	

Notes

- Excited about tech and the possibilities of machine learning
- Especially into the startup scene
- Thinks the Suomi Cloud system is impressive, but is not able to fully make use of it
- Cares about his family and excited to become a father

Suomi Cloud

Personal data

Surname (current):	Almeida Pinto
First names (current):	Luiz Antônio
Date of birth:	04.08.2003
Marital status:	Unmarried
Mother tongue:	Portuguese
Country of birth:	Brazil
Municipality of residence:	Helsinki
Occupation:	Personal Data Broker
Income level:	Medium-high
Education level:	MSc
Digital skills:	8/10
Privacy concern:	Low
Children:	0
Hobbies:	

Notes

- Excited about tech and the economic possibilities of data trading
- Thinks the Suomi Cloud system is impressive, but somewhat limiting
- Considering moving to a different EU country

Suomi Cloud

Personal data

Surname (current):	Chang
First names (current):	Mei Nian
Date of birth:	11.03.2007
Marital status:	Cohabitant
Mother tongue:	Mandarin
Country of birth:	China
Municipality of residence:	
Occupation:	Augmented Reality Designer
Income level:	Medium-high
Education level:	MSc
Digital skills:	8/10
Privacy concern:	Low
Children:	1
Hobbies:	

Notes

- Excited about tech, and keeps buying new gadgets, especially from the startup scene in Shenzhen
- Thinks the Suomi Cloud system is impressive, but is not able to fully make use of it
- Currently on maternity leave, but existed to get back to work

Suomi Cloud

Personal data

Surname (current):	Nummi
First names (current):	Anneli
Date of birth:	06.06.1974
Marital status:	Widowed
Mother tongue:	Finnish
Country of birth:	Finland
Municipality of residence:	
Occupation:	Digital Detox Therapist
Income level:	Medium-Low
Education level:	BScN
Digital skills:	6.5/10
Privacy concern:	Medium
Children:	2
Hobbies:	

Notes

- Thinks digital services has become easier to use, but calls her kids when she needs help
- Has to spend some time taking care of her 86 year old mom
- Enjoys following the new wave of senior influencers on social media

Suomi Cloud

Personal data

Surname (current):	Järvinen
First names (current):	Tapio
Date of birth:	18.02.1973
Marital status:	Divorced
Mother tongue:	Finnish
Country of birth:	Finland
Municipality of residence:	
Occupation:	Physical Therapist
Income level:	Medium-Low
Education level:	Bachelor from UAS
Digital skills:	5/10
Privacy concern:	Medium
Children:	1
Hobbies:	

Notes

- Is not interested in getting retired any time soon
- Spends a lot of time taking care of his 90 year old mom
- Doesn’t like to bother his son too much when he needs help with digital things

Suomi Cloud

Personal data

Surname (current):	Mäkinen
First names (current):	Olavi
Date of birth:	06.06.2013
Marital status:	Unmarried
Mother tongue:	Finnish
Country of birth:	Finland
Municipality of residence:	Helsinki
Occupation:	Unemployed
Income level:	Low
Education level:	High school
Digital skills:	5/10
Privacy concern:	Low
Children:	0
Hobbies:	

Notes

- Dreams of becoming an artist or a crafts teacher
- Occasionally picks up gigs on KaverinKanssa, mostly because he enjoys chatting with the old and wise, but also for some extra funds
- Struggles with dyslexia and mild anxiety
- Recently lost his phone

Suomi Cloud

Personal data

Surname (current):	Rebane
First names (current):	Maksim
Date of birth:	31.10.1983
Marital status:	Unmarried
Mother tongue:	Estonian
Country of birth:	Estonia
Municipality of residence:	Helsinki
Occupation:	Esports Arena Builder
Income level:	Low
Education level:	High school + Online courses
Digital skills:	6/10
Privacy concern:	Low
Children:	0
Hobbies:	

Notes

- Been living in Finland for 30 years
- Currently on partical sick leave due to a bad shoulder and knees
- Considering re-eduacting and switching up his career

Suomi Cloud

Personal data

Surname (current):	Kivi
First names (current):	Taneli
Date of birth:	31.10.2010
Marital status:	Cohabitant
Mother tongue:	Finnish
Country of birth:	Finland
Municipality of residence:	
Occupation:	Personal Digital Assistant (PDA)
Income level:	Low
Education level:	High school + MOOC
Digital skills:	7.5/10
Privacy concern:	Low
Children:	0
Hobbies:	

Notes

- Would like to study more and change his job
- Spends a lot of energy hiding a growing online gaming addiction
- Fighting for union rights for PDAs
- Planning on proposing to his partner

Workshop feedback

Thank you so much for participating in the workshop on Tuesday. I was really happy and impressed by your efforts and how you embraced the role play!

As my thesis revolves around researching the method of combining speculative design and role play to surface socio-politial implications, I want to hear your thoughts on how you experienced it, and if it worked to it's purpose or not. I hope you don't mind filling out this quick survey to help me further my research.

* Required

1. Name / Character name *

_____

2. What is your current work title? *

_____

3. Age *

Mark only one oval.

- ◯ 20-25
- ◯ 26-35
- ◯ 36-45
- ◯ 46-55
- ◯ 56-65
- ◯ 66+

4. What pronouns do you use? *

Mark only one oval.

- ◯ She/her
- ◯ They/them
- ◯ He/him
- ◯ Prefer not to answer
- ◯ Other: _____

5. Overall, how much did you enjoy the workshop? *

Mark only one oval.

	1	2	3	4	5	
Not very	◯	◯	◯	◯	◯	Very much

6. What did you like about the workshop? *

7. What could be improved about the workshop? *

8. What did you find the most challenging in workshop? *

Mark only one oval per row.

	Not challenging	Challenging	Very challenging	Did not participate
Improv basics				
World building (Developing Suomi Cloud further)				
Character development / Writing quotes				
Role play - 2035 Feedback session				
Self reflection				
Group sharing				
Implication mapping				
DVV project mapping				
Wishes from the future				

9. What did you find the most rewarding in workshop? *

Rewarding either in terms of enjoyment or something learning something new

Mark only one oval per row.

	Not rewarding	Rewarding	Very rewarding	Did not participate
Improv basics				
Presentation Vision 2035				
World building (Developing Suomi Cloud further)				
Character development / Writing quotes				
Role play - 2035 Feedback session				
Self reflection				
Group sharing				
Implication mapping				
DVV project mapping				
Wishes from the future				

Role play & Suomi Cloud

10. Have you had any previous experience with improvisation / role play? *

Mark only one oval.

	1	2	3	4	5	
Not at all						Very much

11. How did you prepare for the workshop - did you make up a background story or just read the character details - and did you find it useful during the role play? *

If you didn't have time to prepare before the workshop, did it feel like a significant disadvantage in order to "get into character" during the role play?

12. For the purpose of the role play and understanding your character, how useful did you find *

1 = Not useful 5 = Very useful

Mark only one oval per row.

	1	2	3	4	5	N/A
The character details						
Your own reflection before the workshop						
Vision 2035 / Suomi Cloud presentation						
The pre-written quote cards						
Suomi Cloud World building						
Writing your own quotes						

13. Was the information provided (character details + pre-written quotes) sufficient for you to build a believable character? Did your character feel like a stereotype? *

14. How similar would you say you are to the character you played? *

Mark only one oval.

	1	2	3	4	5	
Not at all						Very much

15. Did you find the viewpoints represented by the characters in your group to be well-balanced? *

Mark only one oval.

	1	2	3	4	5	
Not at all	◯	◯	◯	◯	◯	Very much

16. During the role play, how much did you rely on your quotes as opposed to improvise on the spot? *

Mark only one oval.

	1	2	3	4	5	
Only quotes	◯	◯	◯	◯	◯	Only improvised

17. Did your perception of your character change during the course of the workshop? How? (before/during/after the role play) *

18. Was the vision 2035 presentation and Suomi Cloud concept sufficient enough as a base for imagining life in 2035 for your character? *

Mark only one oval.

	1	2	3	4	5	
Not at all	◯	◯	◯	◯	◯	Very much

19. Do you find the Suomi Cloud concept to be a plausible future? *

Mark only one oval.

	1	2	3	4	5	
Not at all	◯	◯	◯	◯	◯	Very much

20. Did your perception of Suomi Cloud change during the course of the workshop? How? (before/during/after the role play) *

21. Overall, how useful did you find the role play for *

1 = Not useful 5 = Very useful

Mark only one oval per row.

	1	2	3	4	5
further exploring the concept of Suomi Cloud	◯	◯	◯	◯	◯
further exploring the life of your character	◯	◯	◯	◯	◯
imaging future technical solutions	◯	◯	◯	◯	◯
imagining socio-political implications of future technical solutions	◯	◯	◯	◯	◯
highlighting different perspectives of a system	◯	◯	◯	◯	◯
challenging your own worldview	◯	◯	◯	◯	◯
understanding DVV's work in a longer time perspective	◯	◯	◯	◯	◯
understanding DVV's work in a larger societal context	◯	◯	◯	◯	◯

22. Was there issues/themes you would have like to discuss during the role play but didn't get the chance to?

23. Other thoughts about the role play?

Moving forward

24. How useful did you find the following exercises for reflecting and analyzing the experience of the role play: *

Mark only one oval per row.

	Not useful	Useful	Very useful	Did not participate
Self reflection				
Group sharing				
Implication mapping				
DVV project mapping				
Wishes from the future				

25. What were your key take aways from this workshop? *

26. How relevant do you think it was for your job? *

Mark only one oval.

	1	2	3	4	5	
Not very	◯	◯	◯	◯	◯	Very much

27. Has the role play / workshop been present in your thoughts during the days after the workshop? How?

_____

28. Other comments / thoughts / ideas?

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